



**Customized Parts Catalog for Engine Model**

# **QSK60 CM500**

**CONSTRUCTION**

Prepared Specifically for:

## **Komatsu 830E**

Engine Serial Number: **33179980**



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### **QSK60 CM500**

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Engine Serial Number: **33179980**

**Cummins Inc.**  
Box 3005  
Columbus, Indiana, U.S.A., 47202

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# Cummins Inc.

## New Parts Warranty

### Heavy Duty

#### COVERAGE

##### PRODUCTS WARRANTED

These warranties apply to New Parts marketed by Cummins for its engines (except those for A, B, and C series engines). They apply anywhere in the world where service is available through a Cummins distributor or full service dealer.\*

##### BASE WARRANTY

The Base Warranty covers any failures of parts on or after March 31, 1986, which result, under normal use and service, from defects in workmanship or material (Warrantable Failures). The coverage on cylinder kits designated by Cummins as "Premium Plus" extends two years, 200,000 miles (321,870 kilometers) or 7,200 hours of operation, whichever occurs first, from the date of first installation. The coverage on other parts extends one year, 100,000 miles (160,935 kilometers) or 3,600 hours of operation, whichever occurs first, from the date of first installation.

##### EXTENDED MAJOR COMPONENTS WARRANTY

The Extended Major Components Warranty covers Warrantable Failures on or after March 31, 1986, of engine cylinder blocks, crankshafts, flangeless NT camshafts\*\* and connecting rods (Covered Parts). Bushing and bearing failures are not included. This coverage begins with the expiration of the Base Warranty and ends three years, 300,000 miles (482,805 kilometers) or 10,800 hours of operation, whichever occurs first, from the date of first installation.

**Both the Base Warranty and Extended Major Components Warranty apply to all Owners in the chain of distribution, and coverage continues to all subsequent Owners until the end of the respective periods of coverage.**

#### CUMMINS RESPONSIBILITIES

##### DURING THE BASE WARRANTY

Cummins will pay for all parts and labor needed to repair the damage to the engine resulting from the Warrantable Failure. All labor costs will be paid in accordance with Cummins published Standard Repair Operation guidelines.

Cummins will pay for the lubricating oil, antifreeze, filter elements, and other maintenance items that are not reusable due to the Warrantable Failure.

Cummins will pay reasonable labor costs for engine removal and reinstallation when necessary to make the warranty repair.

When the parts are installed in a non-automotive engine, Cummins will pay reasonable travel expenses for mechanics to and from the engine site, or the repair dock in the case of a marine engine, including meals, mileage and lodging when it is necessary for mechanics to make on-site warranty repairs.

##### DURING THE EXTENDED MAJOR COMPONENTS WARRANTY

Cummins will pay for the Covered Part and for any Covered Part damaged by a Warrantable Failure of another Covered Part.

#### OWNER RESPONSIBILITIES

##### DURING THE BASE WARRANTY

Before expiration of the warranty, Owner must give notice to Cummins distributor or full service dealer\* of a failure considered to be warrantable and have the repair performed by such facility.

If the part was installed in an automotive engine, the Owner must deliver the engine to the repair location. If installed in a marine engine, Owner is responsible for the cost of towing the boat to a repair dock and for any associated docking and harbor charges.

Owner is responsible for the cost of lubricating oil, antifreeze, filter elements and other maintenance items replaced during warranty repairs except where such items are not reusable due to a Warrantable Failure.

##### DURING THE EXTENDED MAJOR COMPONENTS WARRANTY

Before expiration of the warranty, Owner must give notice to a Cummins distributor or full service dealer\* of a failure considered to be warrantable and deliver the defective and damaged Covered Parts to such facility.

Owner is responsible for the cost of all parts needed for the repair except for the defective Covered Part and for any Covered Part damaged by a Warrantable Failure of another Covered Part.

Owner is responsible for the cost of all labor needed to repair the engine, including the labor to remove and reinstall the engine. When Cummins elects to repair a part instead of replacing it, Owner is not responsible for the labor needed to repair the part.

Owner is responsible for the cost of lubricating oil, antifreeze, filter elements and other maintenance items replaced during the repair.

##### DURING BOTH WARRANTIES

At the time when the parts are installed, Owner is responsible for the preparation of a written record containing the following: (1) the date of installation of the parts; (2) the engine serial number; (3) the engine miles, hours or kilometers of operation; (4) the parts installed, and (5) the location of the parts in the engine. The purpose of this record is to protect Owner's interests and support any claim for a Warrantable Failure.

Owner is responsible for the operation and maintenance of the engine as specified in Cummins Operation and Maintenance Manuals.

Owner is responsible for communication expenses, meals, lodging and similar costs incurred by Owner as a result of a Warrantable Failure. Owner is responsible for non-engine repairs and for "down time" expenses, cargo damage and all business costs and losses resulting from a Warrantable Failure. CUMMINS IS NOT RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

#### LIMITATIONS

Cummins is not responsible for failures resulting from Owner or Operator abuse or neglect, such as: operation without adequate coolant, fuel or lubricants; overfueling; overspeeding; lack of maintenance of lubricating, cooling or air intake systems; improper storage, starting, warm-up, run-in or shutdown practices. Cummins is also not responsible for failures caused by incorrect fuel, or by water, dirt or other contaminants in the fuel.

Cummins does not warrant parts supplied by Cummins which bear the name of another company. These parts are warranted by their manufacturers and not by Cummins. This category of parts includes, but is not limited to: hydraulic pumps, alternators, starters, fans, air conditioning compressors, clutches, steering pumps, transmissions, torque converters, marine gears, air cleaners, filters and non-Cummins air compressors, power steering pumps, and engine compression brakes.

Parts provided may be new Cummins, Cummins approved rebuilt parts, or repaired parts. Cummins is not responsible for failures resulting from the use of parts not approved by Cummins.

Before a claim for excessive oil consumption will be considered, Owner must submit adequate documentation to show that consumption exceeds Cummins published standards.

This warranty does not apply to parts furnished by Cummins at no charge to the Owner.

**— INVEST IN THE BEST —**

## **Customer Service Information**

This Customized Parts Catalog contains parts information for the following Cummins Engine:

### **Engine Data**

Model Number	QSK60 CM500
Serial Number	33179980
Shop Order Number	SO79724
Build Plant	DAVENTRY ENGINE PLANT
Build Date	04JAN10
Fuel Pump Part Number	4903532
Fuel Pump Calibration	BS79
Engine Configuration Number	D593001CX03
CPL Number	CPL2848

Certain basic engine components have been matched to give optimum performance to your engine. The part numbers listed in this catalog for these components are for a standard engine configuration. When ordering any of the Control Parts List (CPL) components listed below, please order by part description and engine serial number. Reference to the CPL number stamped on the engine data (name) plate will also help identify the proper service parts for your engine.

This catalog was compiled using the most current information as of 19-AUG-10.

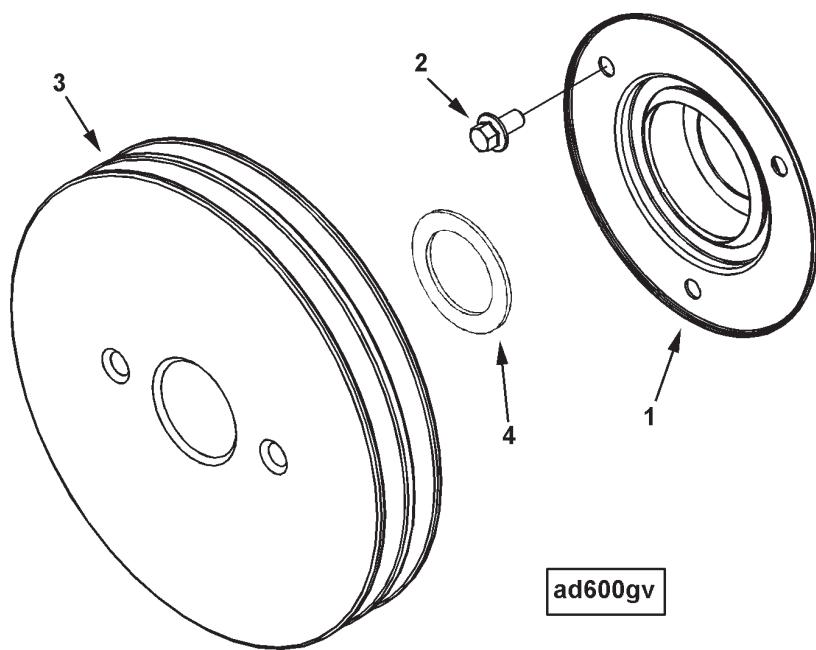
### **USER INFORMATION**

- . Parts numbers appearing in ( ) are for identification purposes only and should not be used when ordering service replacement parts.
- . The reference numbers appearing on the art pages is for publication use only.
- . Assembly content is shown by part number indentation.
- . Options are engineered production part groupings, specifically used for compiling engine orders.
- . Option numbers are for reference only and are not sold for service.
- . Use assembly and not option content to determine service parts replacement.
- . Always specify engine model and serial number when ordering parts from this catalog.
- . Continual product improvement causes the constant obsolescence and replacement of part numbers. Service Parts you receive may not be the part number as those listed in this parts catalog.



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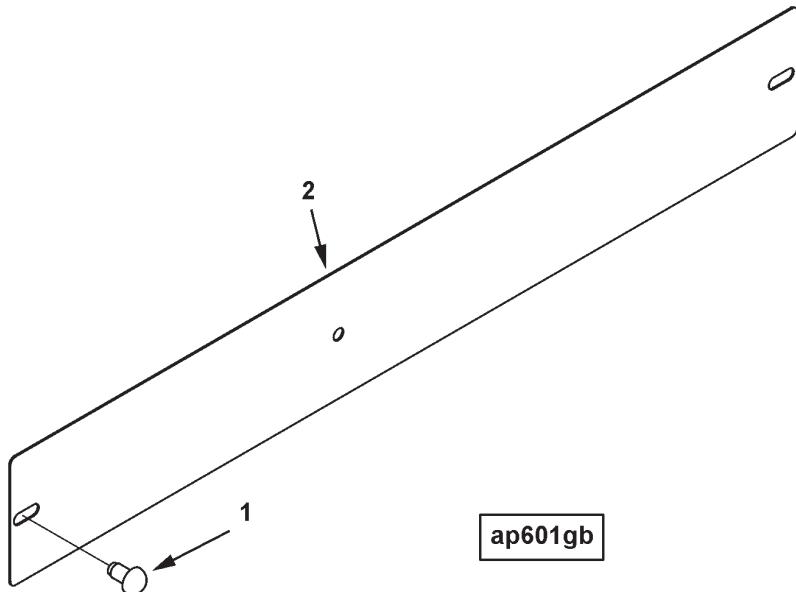
**ad600gv**

Group No. 09.03

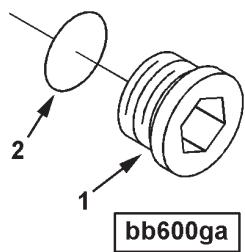
**Accessory Drive Pulley**

Option No. AD6020

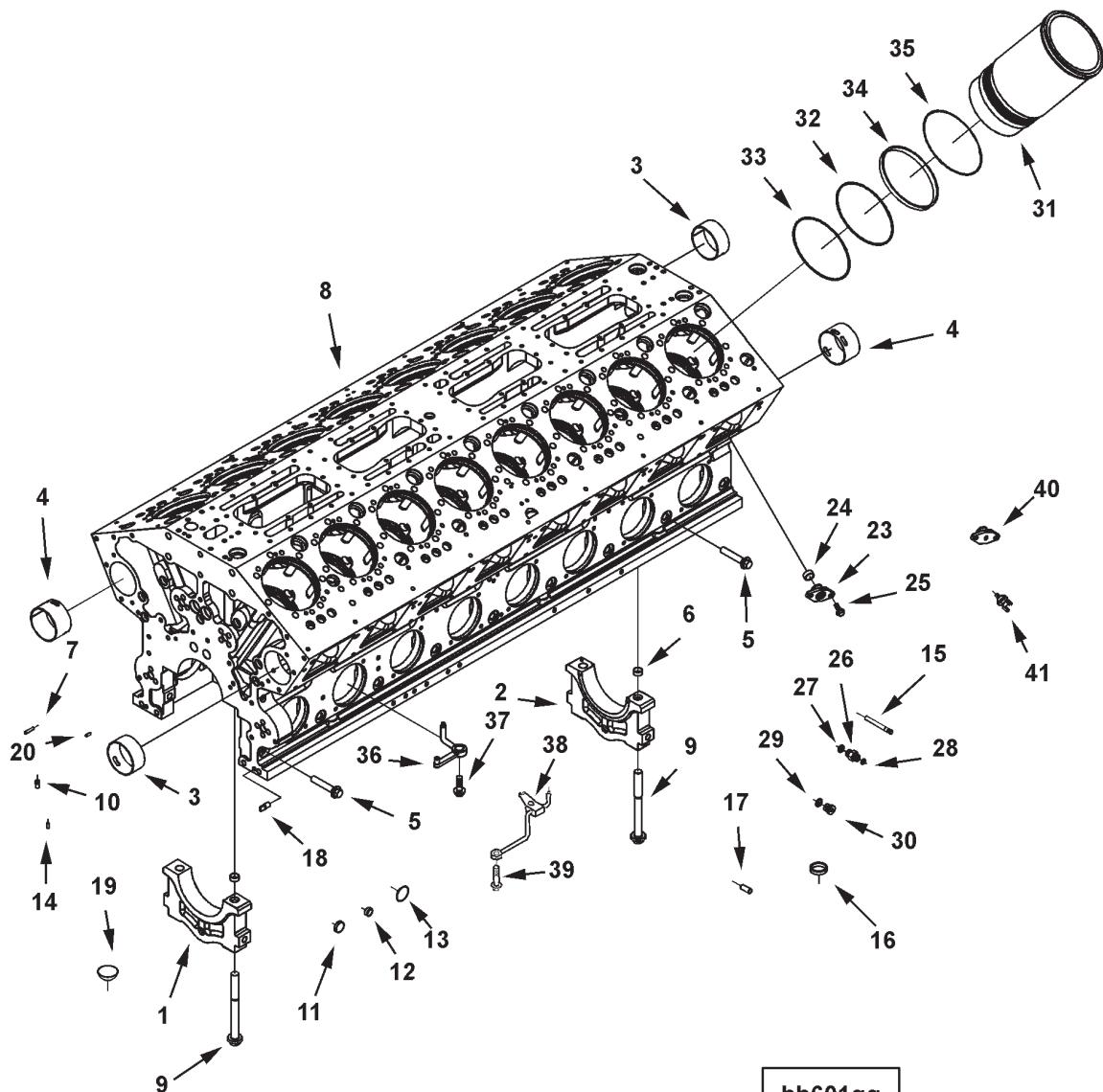
<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>ACCESSORY DRIVE PULLEY OPTION AD6020</b>		Accessory drive pulley pulley diameter: 171.5 Number Of Grooves: 2 Groove description: .38 inch vee. Belt pulley description: Mounted through the front gear cover-left bank. Direction of rotation: Same as crank Drive Ratio To Engine Speed: 1.21:1
1	4080404	Seal, Oil	1	
2	3900626	Screw, Hex Flange Head Cap	3	
3	4080400	Pulley, Accessory Drive	1	
4	4080395	Spacer, Mounting	1	M6 X 1.00 X 12.

**ap601gb**

Ref No.	Part Number	Part Name	Req	Remarks
		<b>APPROVAL,AGENCY</b> <b>OPTION AP6081</b>		Agency approval Certified By: EPA ,CARB Application: Nonroad cert level: Tier 2,tier 2 special allowance: N/A cert agent: EPA ,CARB comment: Non sentinel Fuel Type: Diesel manufacturer of record: Komatsu.
1 2	3056508 4970364	Screw, Drive Dataplate	3 1	



Ref No.	Part Number	Part Name	Req	Remarks
1 2	3678873 (3678791) 3678786	<b>CYLINDER BLOCK PLUMBING OPTION BB6708</b>  Plug, Threaded Plug, Threaded Seal, O Ring	1 1 1	Cylinder block plumbing  M18x1.5

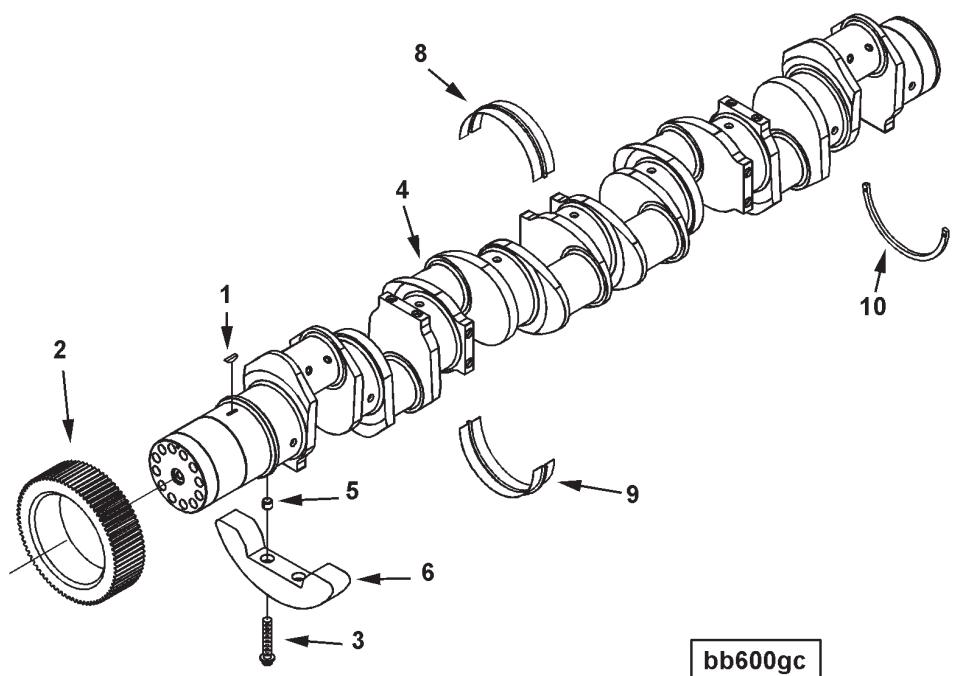


Group No. 01.01

**Cylinder Block**

Option No. BB6714

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>CYLINDER BLOCK OPTION BB6714</b>		
				Block, cylinder
1	3640782 (3640735)	Block, Cylinder	1	
1	3642431	Block, Cylinder	1	
2	3642432	Cap, Main Bearing	8	
3	4007741	Cap, Main Bearing	1	
4	3089173	Bushing	2	
5	3089192	Bushing	16	
6	3089201	Screw, Hex Flange Head Cap	18	
7	4016701	Dowel, Ring	9	
8	3640533	Dowel, Pin	2	
9	3332234 (4001054)	Block, Cylinder	1	
9	3332234 (4001054)	Screw, Hex Flange Head Cap	18	
10	68445	Kit, Service Block	1	
10	68445	Pin, Groove	32	
11	4017622	Plug, Expansion	4	
12	3082438	Dowel, Ring	32	
13	3629168	Plug, Expansion	9	
14	4016468	Dowel, Pin	4	
15	3640776	Seal, Tamper Proof	24	
16	4017621	Plug, Expansion	8	
17	3089378	Dowel, Pin	1	
18	3089379	Dowel, Diamond	1	
19	4017240	Plug, Expansion	19	
20	4001096	Dowel, Pin	16	
22	3903990	Screw, Hex Flange Head Cap	38	M10 x 1.50 x 20
23	3631471	Adapter, O Ring	2	
24	3632840	Seal, O Ring	6	
40	4080519	Adapter, O Ring	4	
25	3902460	Screw, Hex Flange Head Cap	12	M10 x 1.50 x 25
	3090400	Union, Male	4	
26	3090419	Union, Male	4	
27	3679139	Seal, O Ring	4	
28	3922794	Seal, O Ring	4	
	3678873	Plug, Threaded	2	
29	3678786	Seal, O Ring	2	
30	(3678791)	Plug, Threaded	2	
	4089143	Kit, Cylinder Liner	16	
31	(4085917)	Liner, Cylinder	16	
32	4017292	Seal, D Ring	16	
33	3014668	Seal, D Ring	16	
34	3081489	Seal, Oil	16	
35	3088386	Ring, Liner Seal	16	
35	3088385	Ring, Liner Seal	A/R	
35	3088387	Ring, Liner Seal	A/R	
35	3088388	Ring, Liner Seal	A/R	
36	3640540	Nozzle, Piston Cooling	16	
37	3640543	Screw, Hex Flange Head Cap	16	
38	3640536	Nozzle, Piston Cooling	16	
39	3641125	Screw, Hex Flange Head Cap	16	
41	3638583	Draincock	4	

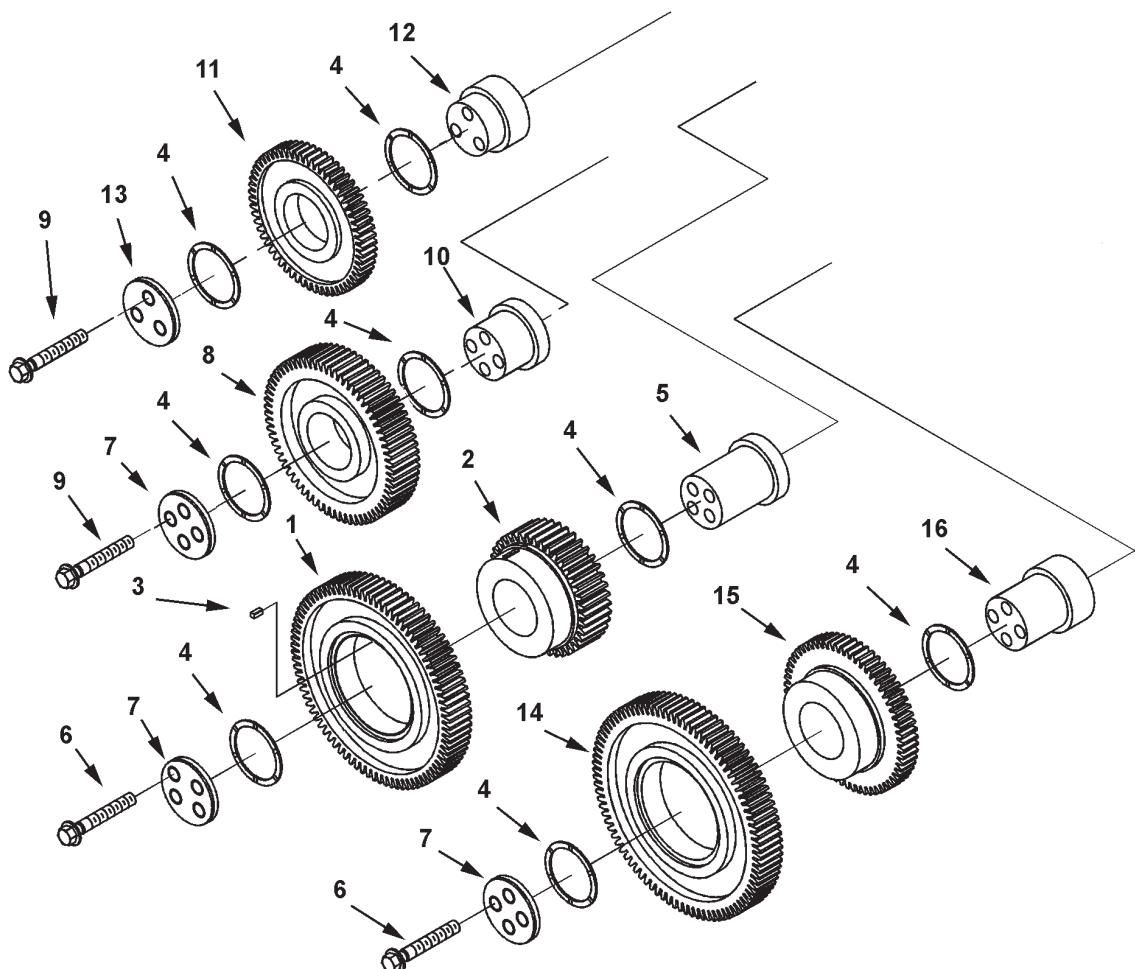


Group No. 01.02

**Crankshaft Assembly**

Option No. BB6714

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>CRANKSHAFT ASSEMBLY OPTION BB6714</b>		
1	(3089797) 206904	Assy, Crankshaft	1	Purchase 3089797 NX
2	4015887	Key, Plain Woodruff	1	
	(3331923)	Gear, Crankshaft	1	
3	3089869	Crankshaft, Engine	1	
4	(3089963)	Screw, Twelve Point Cap	16	
5	3176218	Crankshaft, Engine	1	
6	3331921	Dowel, Ring	16	
	4024792	Weight, Crankshaft Counter	8	
8	3082340	Set, Main Bearing	1	Standard
9	3082346	Bearing, Main	9	
10	4007569	Bearing, Main	9	
	4024793	Bearing, Thrust	4	
8	3082341	Set, Main Bearing	A/R	.25 MM oversize
9	3082347	Bearing, Main	A/R	
10	4007569	Bearing, Thrust	A/R	
	4024794	Set, Main Bearing	A/R	.50 MM oversize
8	3082342	Bearing, Main	A/R	
9	3082348	Bearing, Main	A/R	
10	4007569	Bearing, Thrust	A/R	
	4024795	Set, Main Bearing	A/R	.75 MM oversize
8	3082343	Bearing, Main	A/R	
9	3082349	Bearing, Main	A/R	
10	4007569	Bearing, Thrust	A/R	
	4024796	Set, Main Bearing	A/R	1.00 MM oversize
8	3082344	Bearing, Main	A/R	
9	3082350	Bearing, Main	A/R	
10	4007569	Bearing, Thrust	A/R	



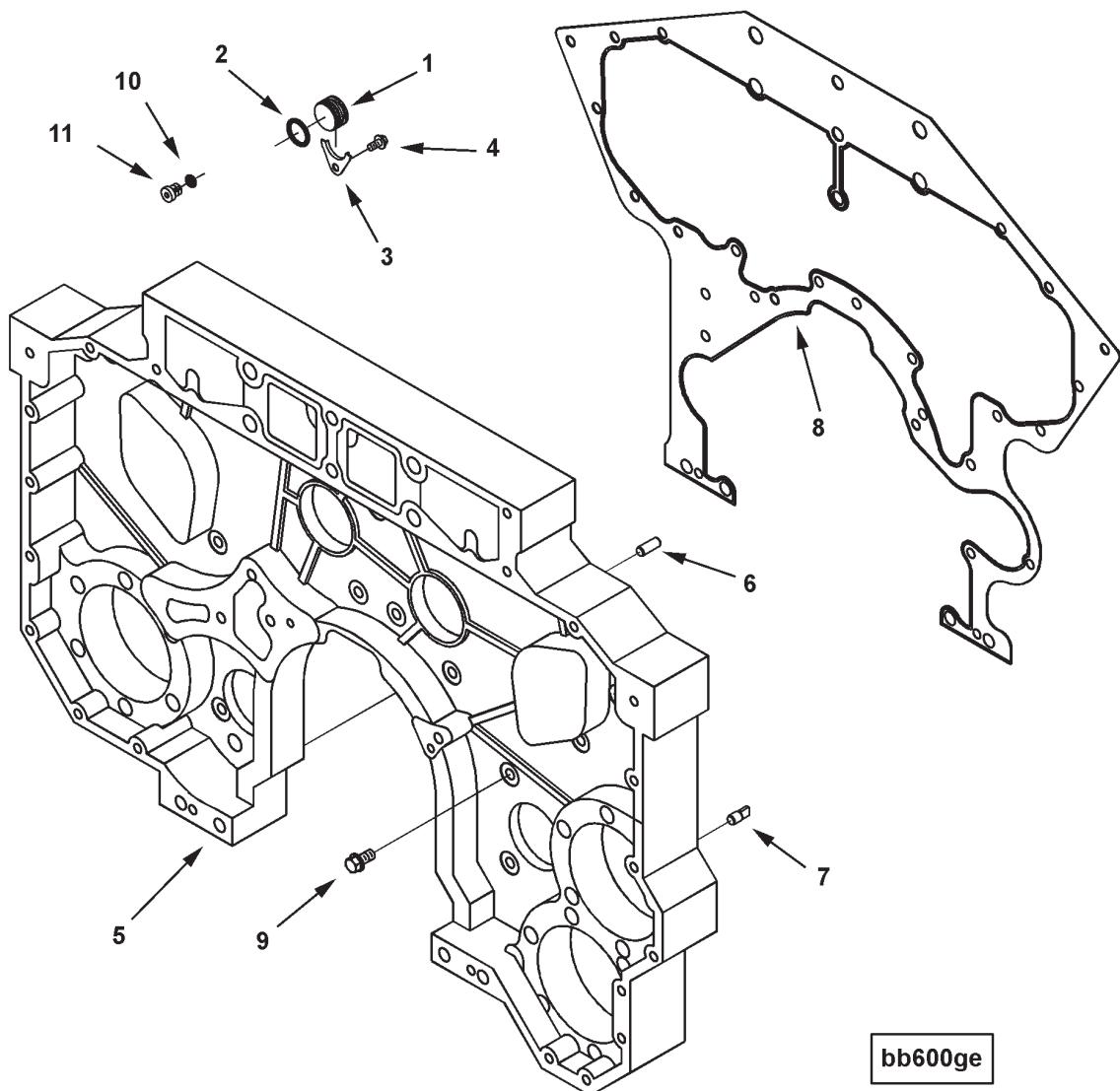
bb600gf

Group No. 01.07.1

**Idler Gear**

Option No. BB6714

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>IDLER GEAR</b>		
		<b>OPTION BB6714</b>		
		<b>L.B. CAM (COMPOUND)</b>		
1	3089087 (4015886)	Gear, Idler	1	
2	(3089089)	Gear, Idler	1	
	3082057	Gear, Idler	1	
	3089090	Bushing	2	
3	3089498	Gear, Idler	1	
4	3082121	Key, Square	1	
5	3089083	Bearing, Thrust	2	
6	3089259	Shaft, Idler	1	
7	3089281	Screw, Hex Flange Head Cap	4	
		Retainer, Gear	1	
		<b>R.B. CAM</b>		
8	3089091 (4000790)	Gear, Idler	1	
	3089214	Gear, Idler	1	
	3089214	Bushing	1	
4	3082121	Bearing, Thrust	2	
9	3082427	Screw, Hex Flange Head Cap	4	
10	3089084	Shaft, Idler	1	
7	3089281	Retainer, Gear	1	
		<b>WATER PUMP</b>		
11	3089105 (4000791)	Gear, Idler	1	
	3089107	Gear, Idler	1	
	3089107	Bushing	1	
4	3082121	Bearing, Thrust	2	
9	3082427	Screw, Hex Flange Head Cap	3	
12	3089104	Shaft, Idler	1	
13	3089320	Retainer, Gear	1	
		<b>ACC. DR. (COMPOUND)</b>		
14	3089121	Gear, Idler	1	
15	3089122 (3089123)	Gear, Idler	1	
	(4000793)	Gear, Idler	1	
	3089315	Bushing	2	
4	3082121	Bearing, Thrust	2	
6	3089259	Screw, Hex Flange Head Cap	4	
7	3089281	Retainer, Gear	1	
16	3089314	Shaft, Idler	1	

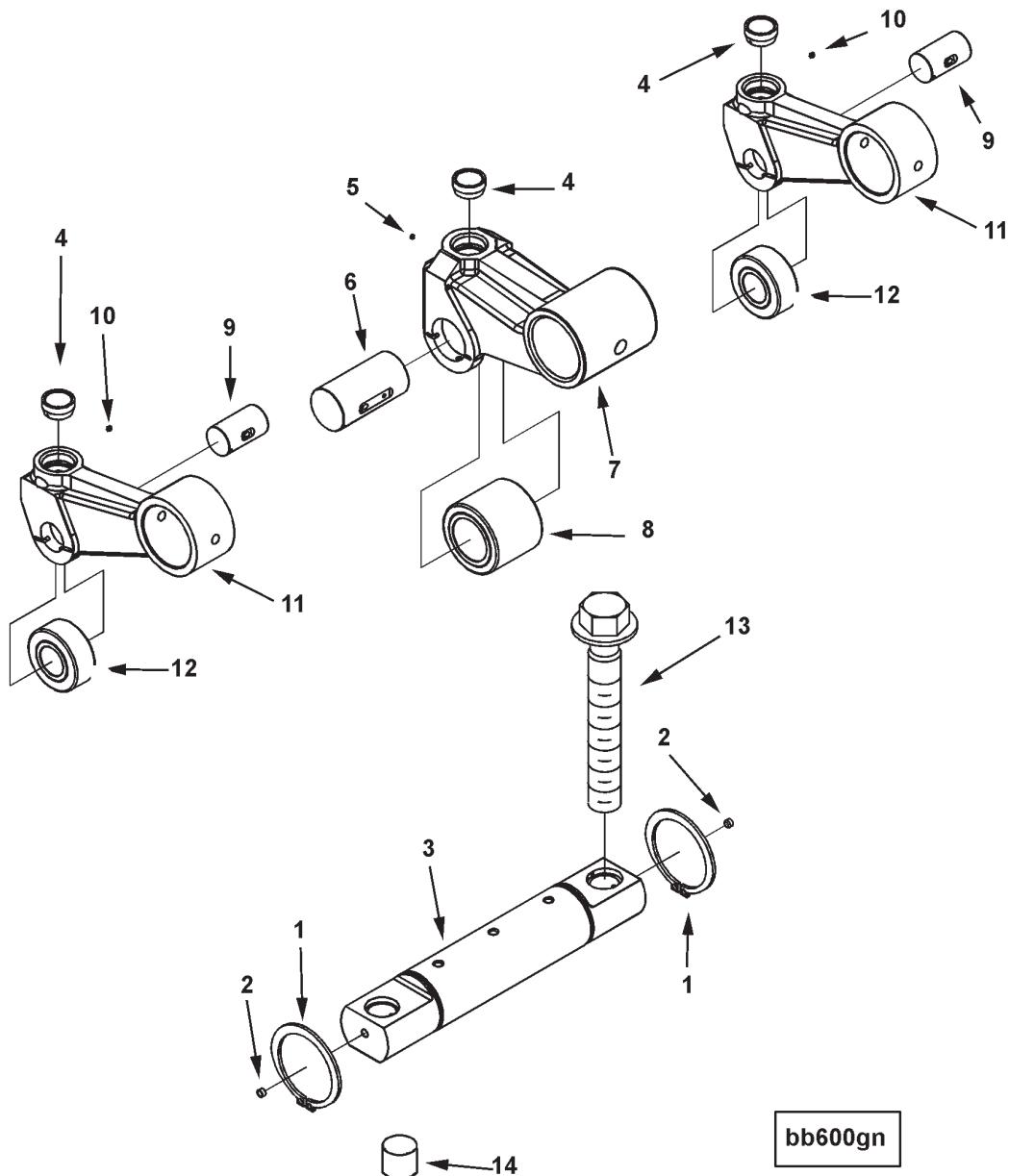


Group No. 01.09

**Gear Housing**

Option No. BB6714

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>GEAR HOUSING OPTION BB6714</b>		
1	3171643	Plug, Gear Housing	2	
2	3035026	Seal, O Ring	2	
3	3090171	Clamp, Tube	2	
4	3900629	Screw, Hex Flange Head Cap	2	
5	3635814	Housing, Gear	1	
6	3089378	Dowel, Pin	1	
7	3089379	Dowel, Diamond	1	
8	4007165	Gasket, Gear Housing	1	
9	3910495	Screw, Hex Flange Head Cap	19	M12 X 1.75 X 30.
	3678611	Plug, Threaded	2	
10	3678606	Seal, O Ring	2	
11	(3678605)	Plug, Threaded	2	M27x2

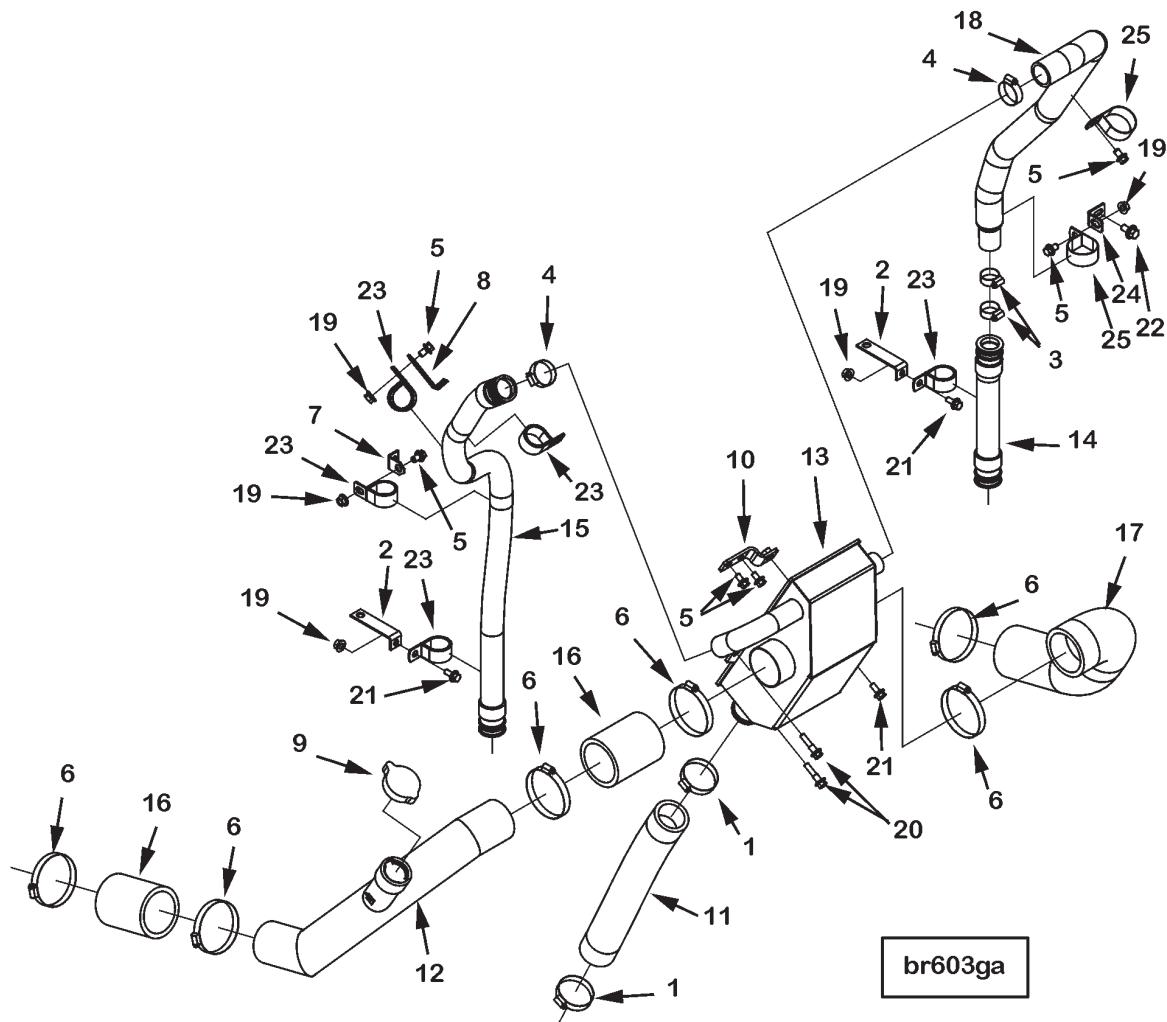


Group No. 04.01

**Cam Follower Lever**

Option No. BB6714

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>CAM FOLLOWER LEVER OPTION BB6714</b>		
1	3082415	Ring, Retaining	32	
	3082416	Shaft, Cam Follower	16	
2	(4066210)	Plug, Ball	2	
3	(3082417)	Shaft, Cam Follower	1	
	4065754	Lever, Cam Follower	16	
4	4006772	Socket, Cam Follower	1	
5	4066811	Plug, Ball	2	
6	4065749	Pin, Cam Follower Roller	1	
7	4065755	Lever, Cam Follower	1	
8	(3089217)	Roller, Cam Follower	1	
	4065756	Lever, Cam Follower	32	
9	4065750	Pin, Cam Follower Roller	1	
10	4066811	Plug, Ball	2	
4	4006772	Socket, Cam Follower	1	
11	4065757	Lever, Cam Follower	1	
12	(3090010)	Roller, Cam Follower	1	
13	3082427	Screw, Hex Flange Head Cap	32	
14	3082438	Dowel, Ring	32	

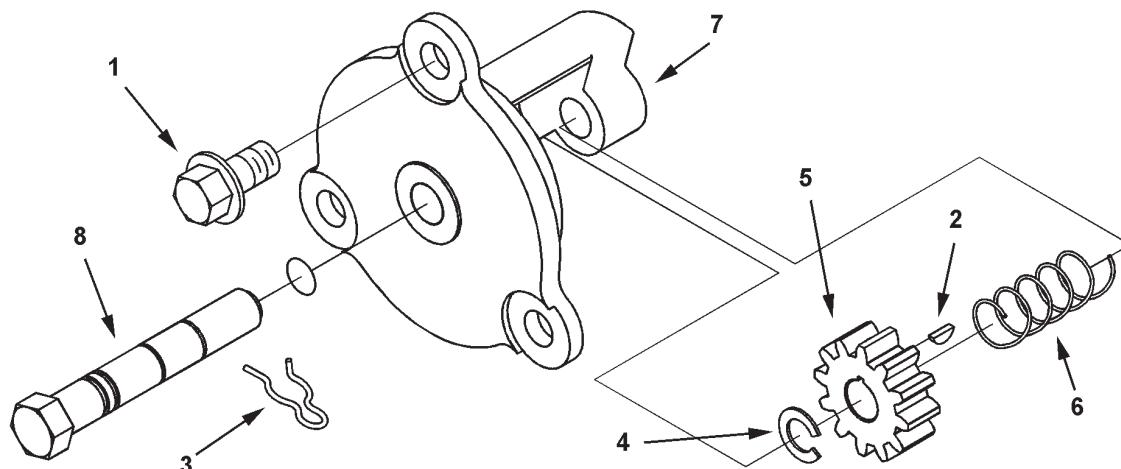


Group No. 03.02

**Breather,Crankcase**

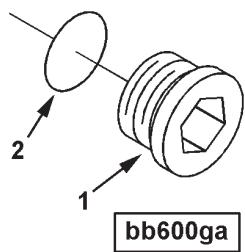
Option No. BR6768

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>BREATHER,CRANKCASE OPTION BR6768</b>		
1	43828 D	Clamp, Hose	2	2 1/16 - 3 Inch.
2	3642285	Brace, Tube	2	
3	209773	Clamp, Hose	2	3/4 - 1 3/4 Inch.
4	3010518	Clamp, Hose	2	1 1/2 - 2 Inch.
5	3093957	Screw, Hex Flange Head Cap	6	
6	3396094	Clamp, Hose	6	
7	3628553	Brace, Tube	1	
8	3628554	Brace, Tube	1	
9	3629112	Cap, Filler	1	
10	3636268	Brace, Connection	1	
11	3636435	Hose, Plain	1	
12	3636560	Tube, Breather	1	
13	3636929	Breather, Crankcase	1	
14	3636945	Hose, Molded	1	
15	3636947	Hose, Molded	1	
16	3637200	Hose, Plain	2	
17	3637342	Hose, Molded	1	
18	3637961	Hose, Molded	1	
19	3902662	Nut, Hexagon Flange	5	M10 X 1.50.
20	3903464	Screw, Hex Flange Head Cap	2	M10 X 1.50 X 40.
21	3903990	Screw, Hex Flange Head Cap	3	M10 X 1.50 X 20.
22	3913372	Screw, Hex Flange Head Cap	1	M12 X 1.75 X 20.
23	4006930	Clip	5	
24	4065603	Bracket, Connection	1	
25	4080234	Clip	2	

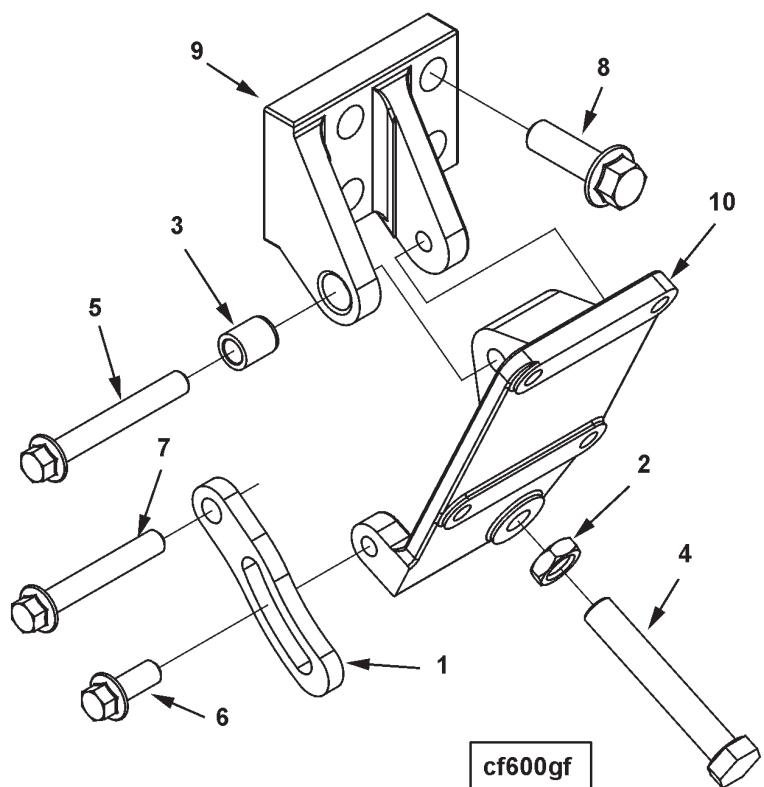


cb600ga

Ref No.	Part Number	Part Name	Req	Remarks
		<b>ENGINE BARRING DRIVE OPTION CB6701</b>		
1	3089324 3332325	Screw, Hex Flange Head Cap Drive, Engine Barring	3 1	Drive, engine barring.
2	S 306	Key, Plain Woodruff	1	
3	169834	Clip	1	
4	206090	Ring, Retaining	1	
5	206091	Gear, Engine Barring	1	
6	206092	Spring, Compression	1	
7	3332326	Housing, Engine Barring	1	
8	3332383	Shaft, Barring	1	
9	3913994	Seal, O Ring	1	



Ref No.	Part Number	Part Name	Req	Remarks
1 2	3678873 (3678791) 3678786	COMPRESSOR COOLANT PLUMBING OPTION CC6701  Plug, Threaded Plug, Threaded Seal, O Ring	1 1 1	Compressor coolant plumbing. Air compressor: None M18x1.5

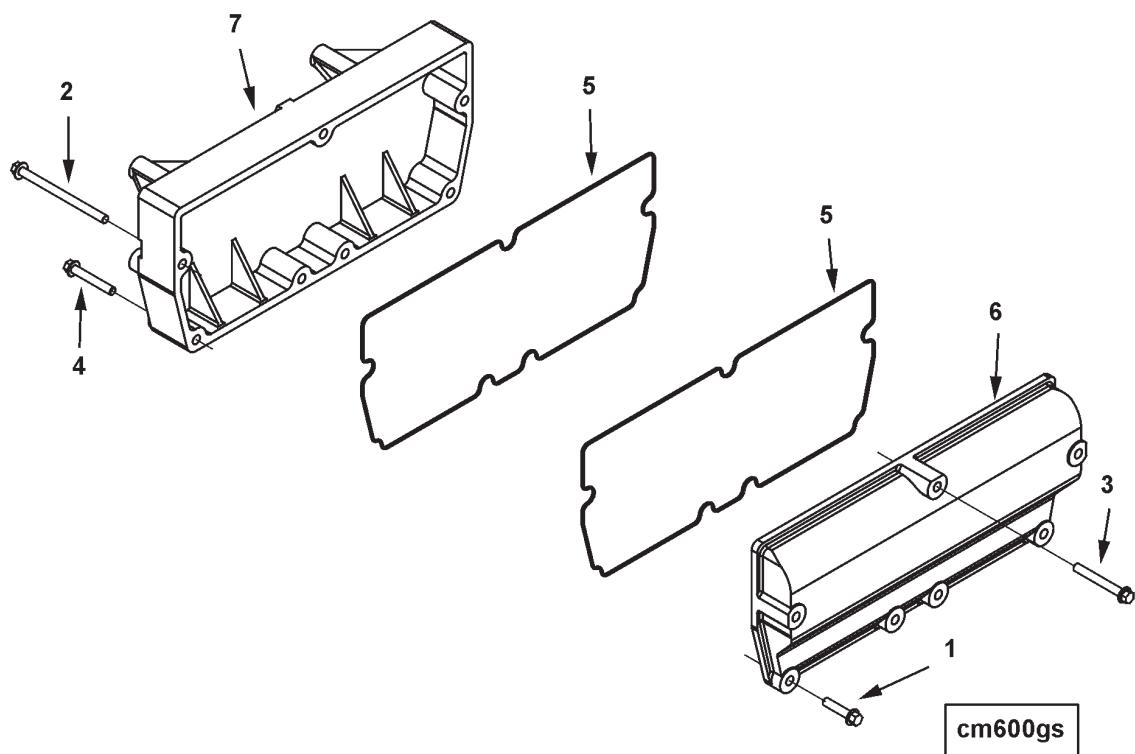


Group No. 12.01

**Mounting,Ref Compressor**

Option No. CF6007

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>MOUNTING,REF COMPRESSOR OPTION CF6007</b>		Refrigerant compressor mounting mounting description: For customer supplied refrigerant compressor mounting location: On engine
1	3171103	Link, Adjusting	1	
2	3251297	Nut, Regular Hexagon Jam	1	
3	3332237	Sleeve	1	
4	3637997	Screw, Hexagon Head Cap	1	
5	3902451	Screw, Hex Flange Head Cap	1	M12 X 1.75 X 90.
6	3910495	Screw, Hex Flange Head Cap	1	M12 X 1.75 X 30.
7	3914177	Screw, Hex Flange Head Cap	1	M12 X 1.75 X 80.
8	3916071	Screw, Hex Flange Head Cap	4	M16 X 2.00 X 50.
9	4016939	Bracket, Ref Compressor	1	
10	3639728	Support, Ref Compressor	1	

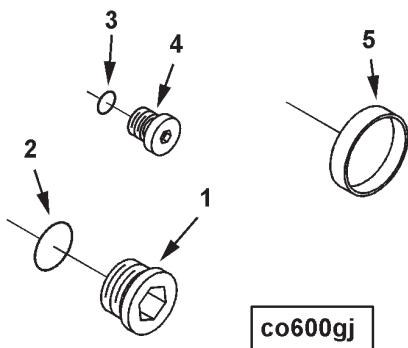


Group No. 04.03

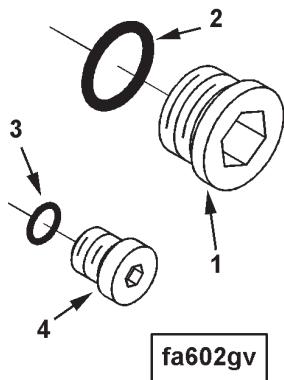
**Cam Follower Cover**

Option No. CM6715

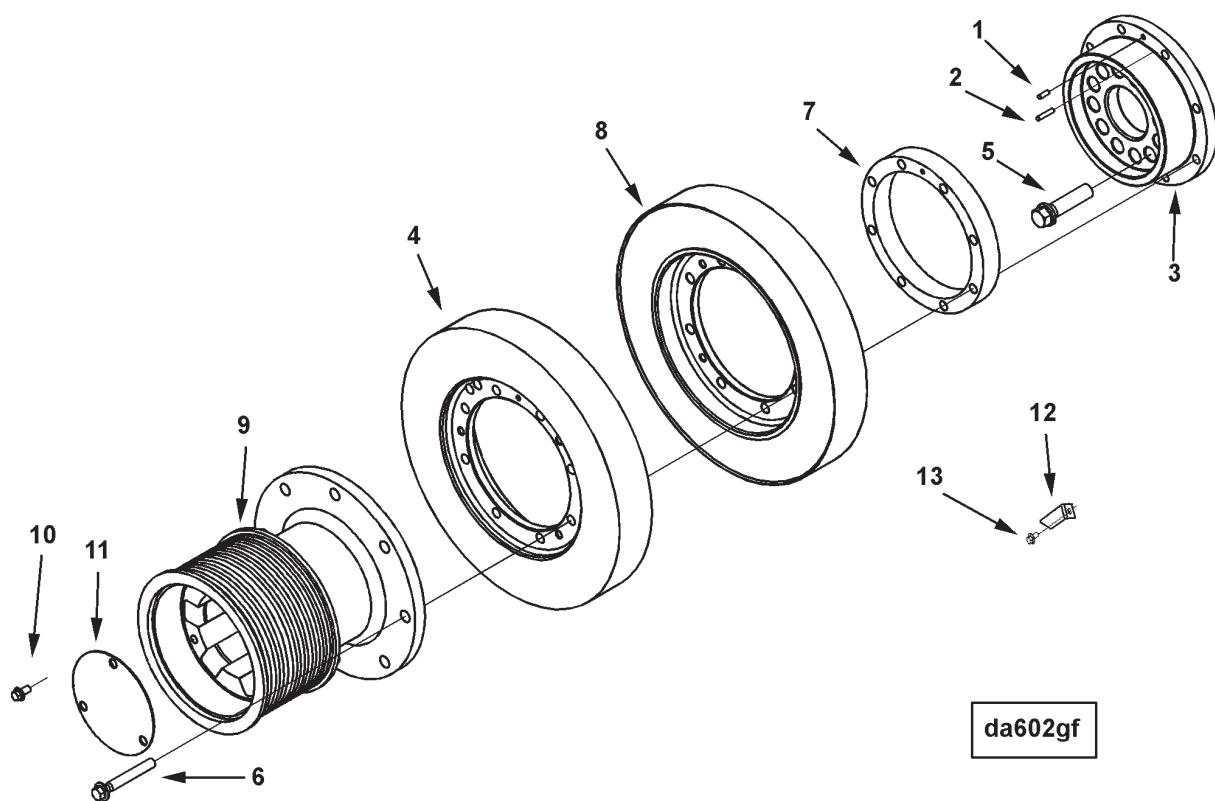
<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>CAM FOLLOWER COVER OPTION CM6715</b>		
1	3089232	Screw, Hex Flange Head Cap	27	Cam follower cover
2	3089316	Screw, Hex Flange Head Cap	3	Engine Model: Qsk60 C cense: Yes two cylinders are covered by each cover.
3	3900679	Screw, Hex Flange Head Cap	18	M10 X 1.50 X 80.
4	3944593	Screw, Hex Flange Head Cap	2	M10 x 1.50 x 65
5	4085924	Gasket, Camshaft Cover	8	
6	4085925	Cover, Camshaft	7	
7	3642053	Cover, Camshaft	1	



Ref No.	Part Number	Part Name	Req	Remarks
		<b>OIL REP SYSTEM PLUMBING</b> <b>OPTION CO6702</b>		Plumbing, oil replenishing system sentinel: No For use on QSK45/60 engines For use with phase 2.0 harness only.
1	3678611 (3678605)	Plug, Threaded	1	
2	3678606	Plug, Threaded	1	
	3678921	Seal, O Ring	1	
3	3678912	Plug, Threaded	1	M14 x 1.50.
4	(3678922)	Seal, O Ring	1	
5	4017621	Plug, Threaded	1	M14 x 1.50.
		Plug, Expansion	1	



Ref No.	Part Number	Part Name	Req	Remarks
		AIR COMPRESSOR OPTION CP6017		
1	3678873 (3678791)	Plug, Threaded	1	Air compressor: No
2	3678786 3678921	Plug, Threaded	1	Plugs are used in thermostat housing.
3	3678912 (3678922)	Seal, O Ring	1	M18x1.5
4		Plug, Threaded	2	
			1	
			1	M14 x 1.50.

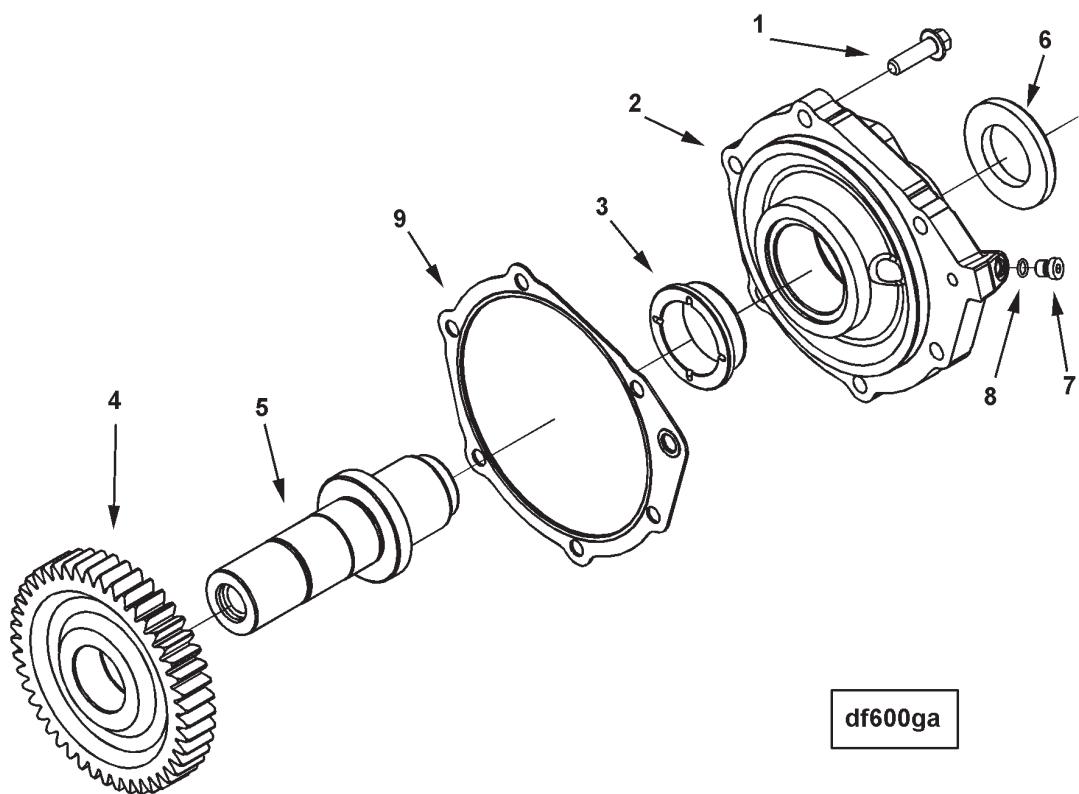


Group No. 01.02.2

**Vibration Damper**

Option No. DA6147

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>VIBRATION DAMPER OPTION DA6147</b>		Vibration damper type: Dual standard viscosity  Number Of Dampers: 2 Provision For Mounting Front Power Takeoff: No pulley material: Cast iron Pulley Groove Description: L-Ribbed pulley diameter: 214mm Number Of Grooves: 23 fan drive: Yes speed limitation: 1900 RPM Unique Characteristics: Base circle diameter of crank attached holes is 241.3. With press fit crankshaft adapter. Drive pulley ratio: 0.42:1 and 0.50:1 and 0.55:1 Engine Model: Qsk60 damper size: 520mm.
1	131584	Pin, Roll	1	
2	3033629	Pin, Roll	1	
3	3089093	Adapter, Crankshaft	1	
4	4007034	Damper, Vibration	1	
5	3089127	Screw, Hex Flange Head Cap	12	
6	3089128	Screw, Hex Flange Head Cap	8	
7	3089570	Spacer, Crankshaft	1	
8	4007035	Damper, Vibration	1	
9	4016987	Pulley, Crankshaft	1	
10	3903990	Screw, Hex Flange Head Cap	3	M10 x 1.50 x 20
11	3036115	Cover, Protective	1	
12	4017238	Pointer, Timing	1	
13	3900626	Screw, Hex Flange Head Cap	1	M6 x 1.00 x 12

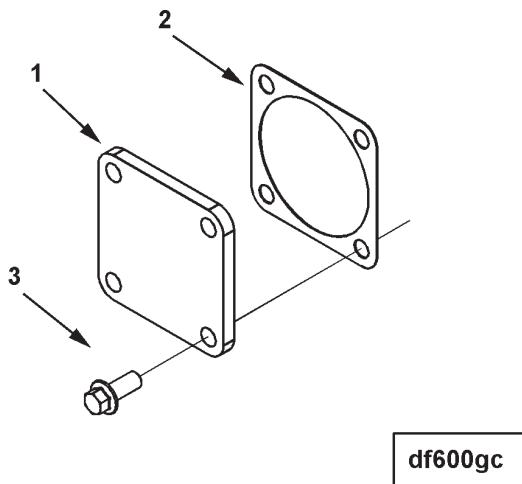


Group No. 09.04

**Front Gear Train Accessory Drive**

Option No. DF6003

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>FRONT GEAR TRAIN ACCESSORY OPTION DF6003</b>		
1	3089016 4066546 4066545	Screw, Hex Flange Head Cap Drive, Hydraulic Pump Support, Hydraulic Pump	6 1 1	Front gear train accessory drive. Drive location front: Yes Drive location rear: Yes Drive provision: Yes Number Of Teeth Spline Drive Front: 13 Number Of Teeth Spline Drive Rear: 13 Can be used with 2 or 4 bolt flange. M10 X 1.50 X 35
2	40666385	Support, Hydraulic Pump	1	
3	3089409	Bushing	2	
	40666057	Gear & Shaft	1	
4	3089100	Gear, Accessory Drive	1	
5	(4065992)	Shaft, Hyd Pump Drive	1	
6	3089415 3678923	Retainer, Shaft Plug, Threaded	1 1	
7	(3678924)	Plug, Threaded	1	M10 X 1 X 13.5
8	3678925	Seal, O Ring	1	M10 x 1.00
9	3332298	Gasket, Hyd Drive Support	1	



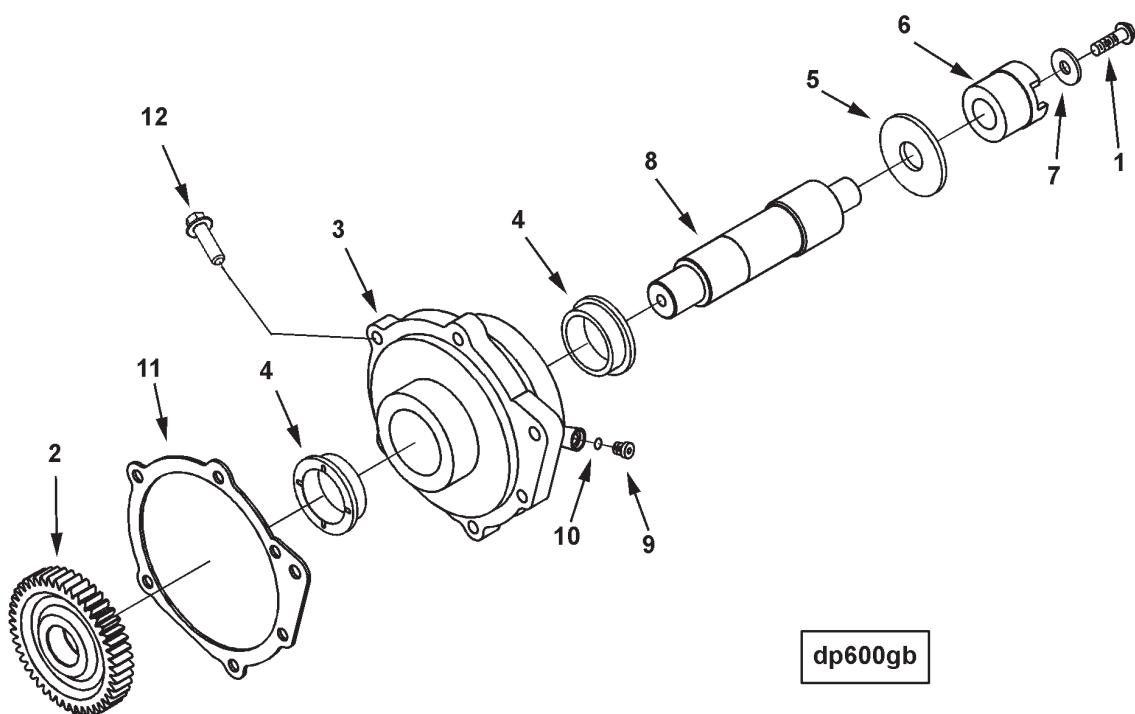
Ref No.	Part Number	Part Name	Req	Remarks
1 2 3	206405 3082132 3910495	FRONT GEAR TRAIN ACCESSORY OPTION DF6701  Plate, Cover Gasket, Cover Plate Screw, Hex Flange Head Cap	1 1 4	Front gear train accessory mounting. Drive location front: N/A Drive location rear: Yes Contains cover plate for rear of accessory drive housing.  M12 x 1.75 x 30

Group No. 99.01

**SOFTWARE,CUS INTERFACE**

Option No. DO6631

Ref No.	Part Number	Part Name	Req	Remarks
		<b>SOFTWARE,CUS INTERFACE OPTION DO6631</b>		<p>Customer interface software</p> <p>Engine Control System: HPI</p> <p>Transmission: Electric Drive</p> <p>Commun Support: J1587,J1939</p> <p>OEM Name: Kms</p> <p>OEM Model: 830 E-AC oemcomment:</p> <p>Haultruck (psc)</p> <p>Remote Throttle: N</p> <p>High Idle: 1910 RPM</p> <p>Low Idle: 0750 RPM ISC enable: On</p> <p>ISC Validation: N/A switch speed input: Yes</p> <p>Torque Curve Selection: No ASG/axg/min/max: ASG governor droop: 00 % idle validation: No</p> <p>Multiple Unit Synchronization: No</p> <p>Output Driver Setup: No</p> <p>Calibration Voltage: 24</p> <p>Throttle Type: Frequency comment: None</p> <p>powermatch: N/A guid: N/A software phase: 5.9.7.8 flywheel size: 0 sentinel: No.</p>

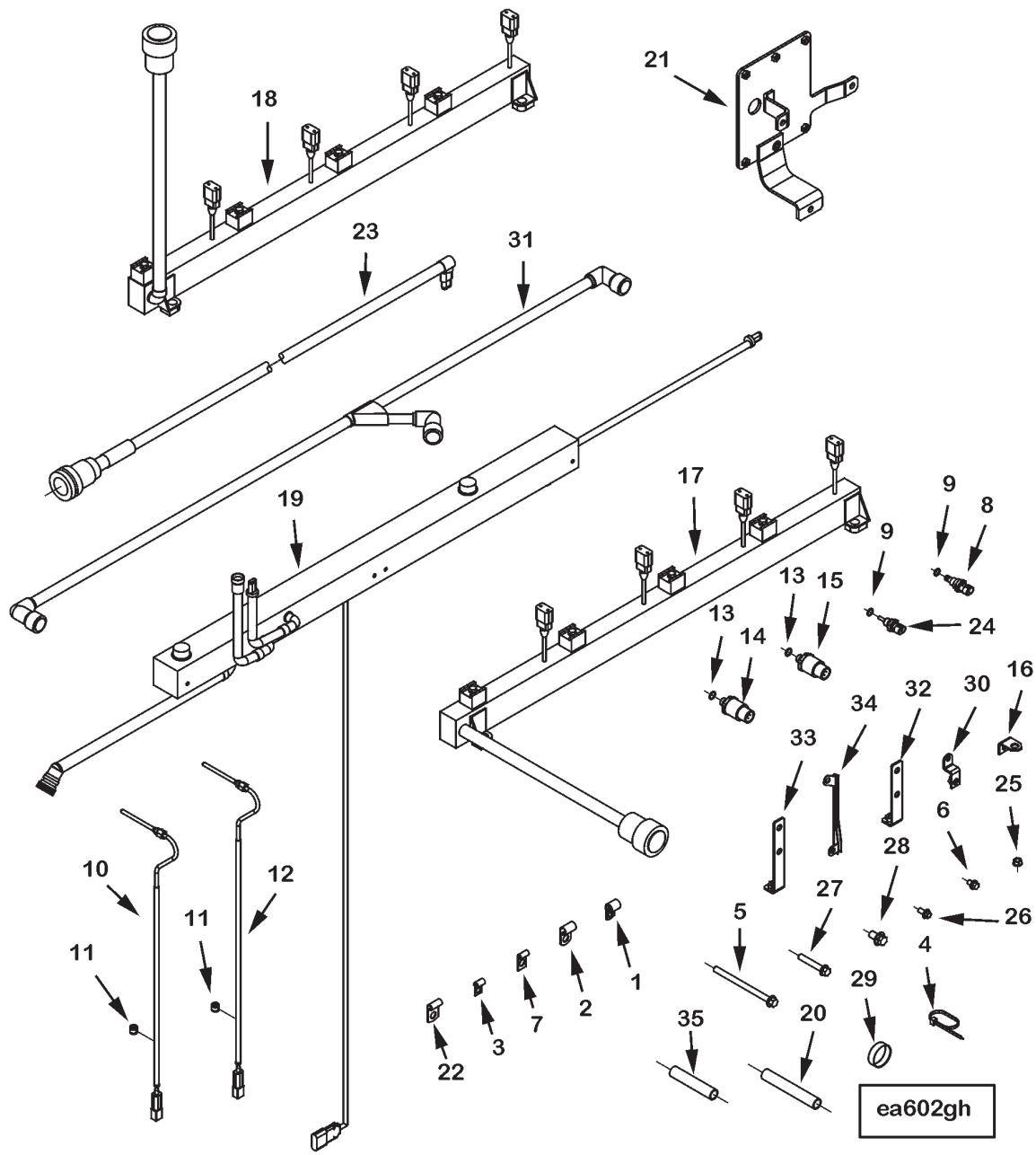


Group No. 09.01

**Fuel Pump Drive**

Option No. DP6702

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>FUEL PUMP DRIVE OPTION DP6702</b>		
1	3904446 4017326	Screw, Hex Flange Head Cap Support, Fuel Pump	1 1	Fuel pump drive Air compressor: No. M10 x 1.50 x 70
2	3089100 3089102	Gear, Accessory Drive Support, Fuel Pump	1 1	
3	3089103	Support, Fuel Pump	1	
4	3089409	Bushing	2	
5	3089407	Washer, Plain	1	
6	4015993	Hub, Jaw Coupling	1	
7	3089555	Washer, Plain	1	
8	4017529 3678923	Shaft, Fuel Pump Drive Plug, Threaded	1 1	
9	(3678924)	Plug, Threaded	1	M10 X 1 X 13.5
10	3678925	Seal, O Ring	1	
11	3332297	Gasket, Acc Drive Support	1	
12	3089016	Screw, Hex Flange Head Cap	6	

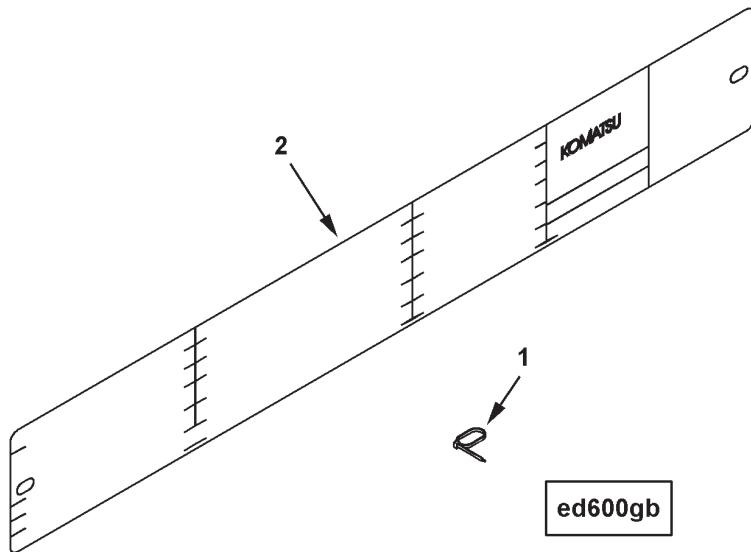


Group No. 21.01.1

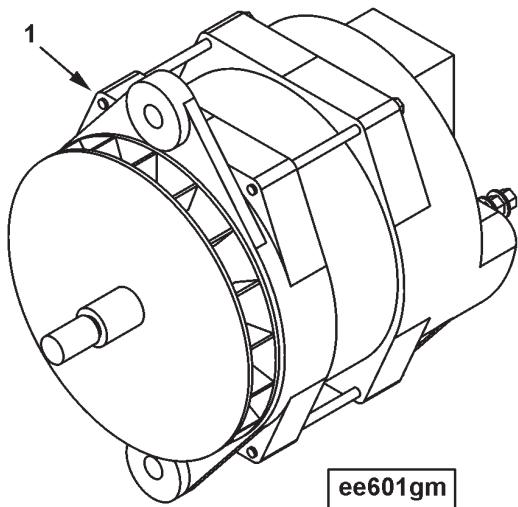
**Accessories, Electrical**

Option No. EA6743

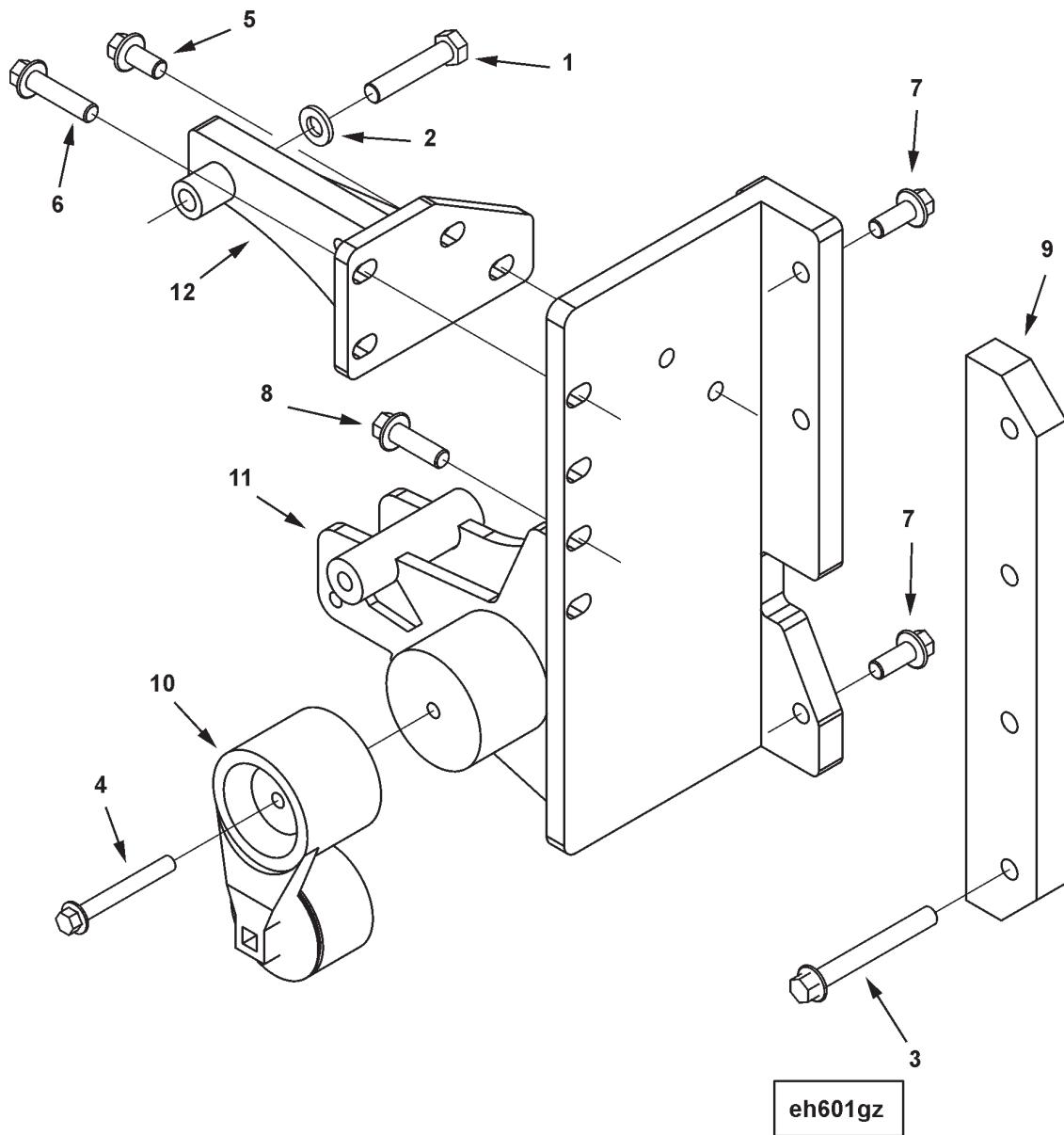
<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>ACCESSORIES,ELECTRICAL OPTION EA6743</b>		
1	68152	Clip	4	
2	68152 B	Clip	6	
3	180371	Clip	16	
4	3062329	Clamp, Wire Tie	2	
5	3089316	Screw, Hex Flange Head Cap	6	
6	3093956	Screw, Hex Flange Head Cap	45	M08 x 1.25 x 12.
7	3281178	Clip	4	
8	3408345 (3408346)	Sensor, Temperature	4	Coolant or intake m
9	(4921574)	Seal, O Ring	1	
10	3408543 (3408500)	Sensor, Temperature	14	Exhaust gas.
11	3408541	Seal, Grommet	1	
12	3408544 (3408542)	Sensor, Temperature	2	Exhaust gas.
13	3408541 (3408542)	Seal, Grommet	1	
14	3408556 (3408557)	Sensor, Temperature	1	Exhaust gas.
15	3330202 (3408559)	Sensor, Pressure	1	Coolant or intake m
16	3330202 (3408559)	Seal, O Ring	1	
17	3628553	Brace, Tube	1	
18	3637064	Harness, Wiring	2	
19	3637066	Harness, Wiring	2	
20	3637070	Harness, Wiring	1	
21	3637448	Shield, Heat	16	
22	3638772 (3639265)	Bracket, Etr Cnt Module	1	
23	3639665	Clip	1	
24	3639665	Harness, Wiring	1	
25	4954905	Sensor, Temperature	1	Coolant or oil.
26	4010519	Seal, O Ring	1	
27	3900589	Nut, Hexagon Flange	1	M8 X 1.25
28	3900629	Screw, Hex Flange Head Cap	4	M8 x 1.25 x 16
29	3900635	Screw, Hex Flange Head Cap	8	M10 X 1.50 X 60.
30	3913372	Screw, Hex Flange Head Cap	1	M12 X 1.75 X 20.
31	4017050	Cover, Protective	1	
32	4066650	Bracket, Wiring Retainer	1	
33	4066653	Harness, Etr Cnt Mdl Wrg	1	Right Bank
34	4066935	Brace, Wiring	1	
35	4066937	Brace, Wiring	2	
36	4097481	Brace, Wiring	14	
37	3642220	Shield, Heat	16	



Ref No.	Part Number	Part Name	Req	Remarks
		<b>DATAPLATE,CUSTOMER OPTION ED6016</b>		Customer, dataplate Certified By: EPA,CARB Application: Nonroad cert level: Tier 2,tier 2 special allowance: N/A cert agent: EPA,CARB manufacturer of record: Komatsu.
1 2	3018920 4970364	Clamp, Wire Tie Dataplate	1 1	



Ref No.	Part Number	Part Name	Req	Remarks
1	3975140	ALTERNATOR OPTION EE6074 Alternator	1	Alternator manufacturer: Manufactured by Prestolite, branded FO rcummins. Model: Bdl 3314 Voltage: 24 Amperage: 140 ground type: Negative insulated: No built in voltage regulator: Yes Wiring Harness Included: No ground strap required: Yes ground strap included: No cooling fan included: Yes brush type: No brushless: Yes.

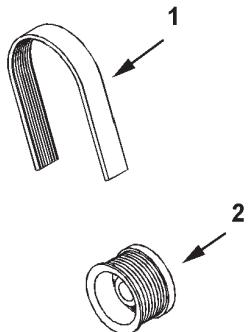


Group No. 13.02.3

**Alternator Mounting**

Option No. EH6015

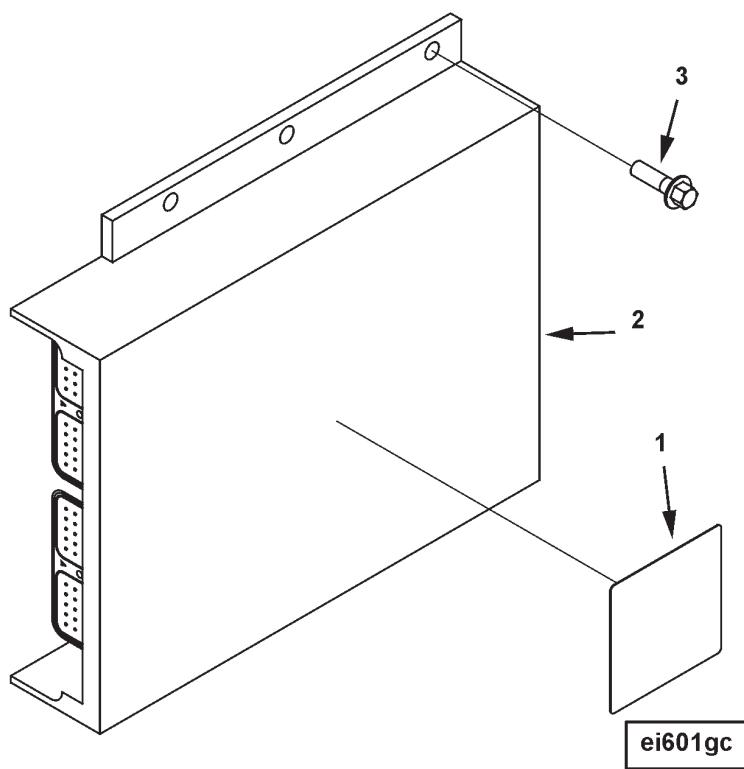
<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>ALTERNATOR MOUNTING OPTION EH6015</b>		Mounting, alternator alternator manufacture: Cummins branded no. of alternators: 1  Drive Ratio: 3.56:1 Model: Prestolite Bdl 3314 pulley description: 10 groove pk section v ribbed Pulley Location: Right Bank Side Of Engine through the front gear cover mounting type: Lug kitted: No attachment point: Crank centerline: TBD mm horizontal crank centerline: TBD mm vertical adjusting link included: No belt description: 10rib pk section v ribbed Unique Characteristics: Automatic belt tensioner.
1	S 150	Screw, Hexagon Head Cap	1	1/2 - 13 X 2 1/2 Inch.
2	3094584	Flange	1	
3	3332242	Screw, Hex Flange Head Cap	4	
4	3896408	Screw, Hex Flange Head Cap	1	
5	3901249	Screw, Hex Flange Head Cap	2	M12 X 1.75 X 25.
6	3902116	Screw, Hex Flange Head Cap	4	M12 X 1.75 X 50.
7	3910495	Screw, Hex Flange Head Cap	3	M12 X 1.75 X 30.
8	3920447	Screw, Hex Flange Head Cap	3	M12 X 1.75 X 40.
9	3638150	Plate, Clamping	1	
10	3638012	Tensioner, Belt	1	
11	3638016	Bracket, Alternator	1	
12	4086640	Bracket, Alternator	1	



**eh601gf**

Ref No.	Part Number	Part Name	Req	Remarks
		<b>ALTERNATOR DRIVE PULLEY OPTION EH6707</b>		
1 2	4066750 3630144	Belt, V Ribbed Pulley, Alternator	1 1	Alternator drive pulley no. of alternators: 1 Drive Ratio: 3.56:1 belt description: 10rib pk section v-ribbed Supplied In Kit: No pulley description: 10 groove pk section v-ribbed alternator manufacturing: Niehoff 260amp 28 v model c653 a-1 and Prestolite 175amp 24volt. Model 8 SC300EH0670700 and Prestolite 140amp 24volt model bld 3314.

## NOTES

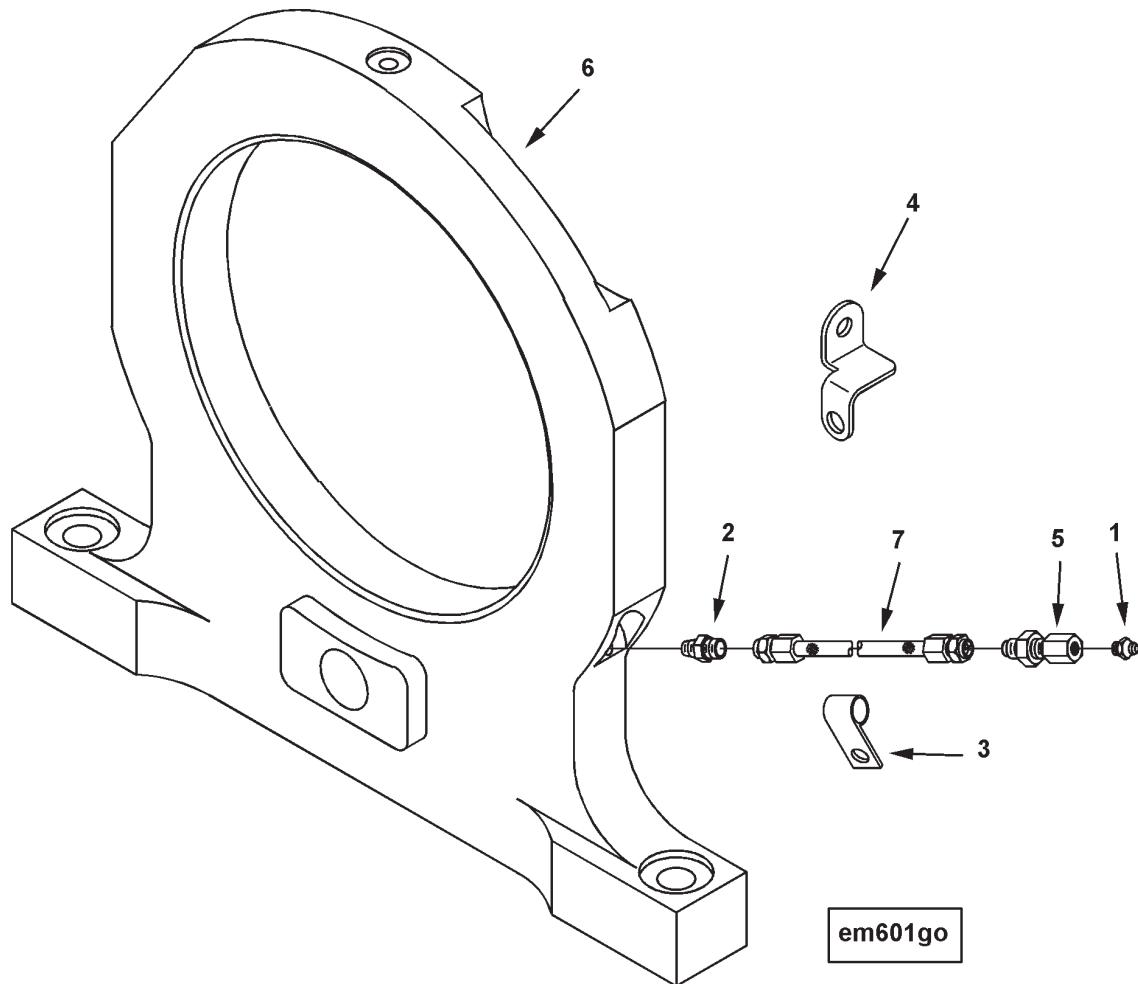


Group No. 15.08

**Monitor, Electronic Engine**

Option No. EI6746

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>MONITOR,ELECTRONIC ENGINE OPTION EI6746</b>		Cense, electronic engine monitoring system Engine Model: Qsk60 Advertised Power: 2500 BHP At 1900 RPM modular mining: N comment: 830 e statex 3 SS hbmep tier 1 OEM Name: Kms OEM Application: Haultruck do: 06117,06118,06399,06400 software phase: 4.0.2 Engine Control System: Aem.
1	3066855	Dataplate	1	
2	3098771	Module, Electronic Control	1	
3	3901865 (4065689)	Screw, Hex Flange Head Cap System, Engine Monitoring	7 1	M6 X 1.00 X 20.

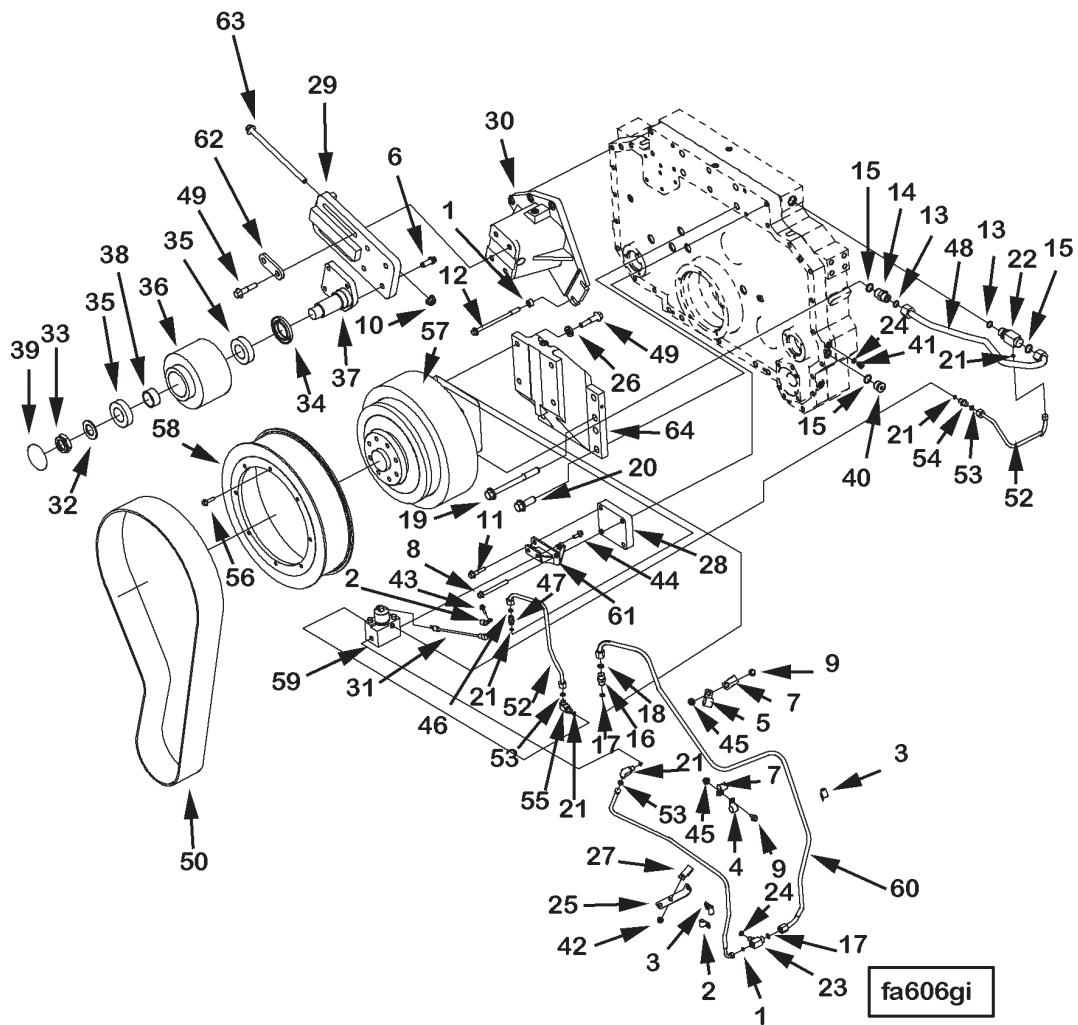


Group No. 16.03

**Front Engine Support**

Option No. EM6085

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>FRONT ENGINE SUPPORT OPTION EM6085</b>		
1	S 2268	Fitting, Grease	1	
2	68138	Connector, Male	1	
3	68425	Clip	1	
4	3634008	Bracket, Connection	1	
5	3634057	Adapter, Plain Pipe	1	
6	4066304	Support, Front Engine	1	
7	4080433	Hose, Flexible	1	

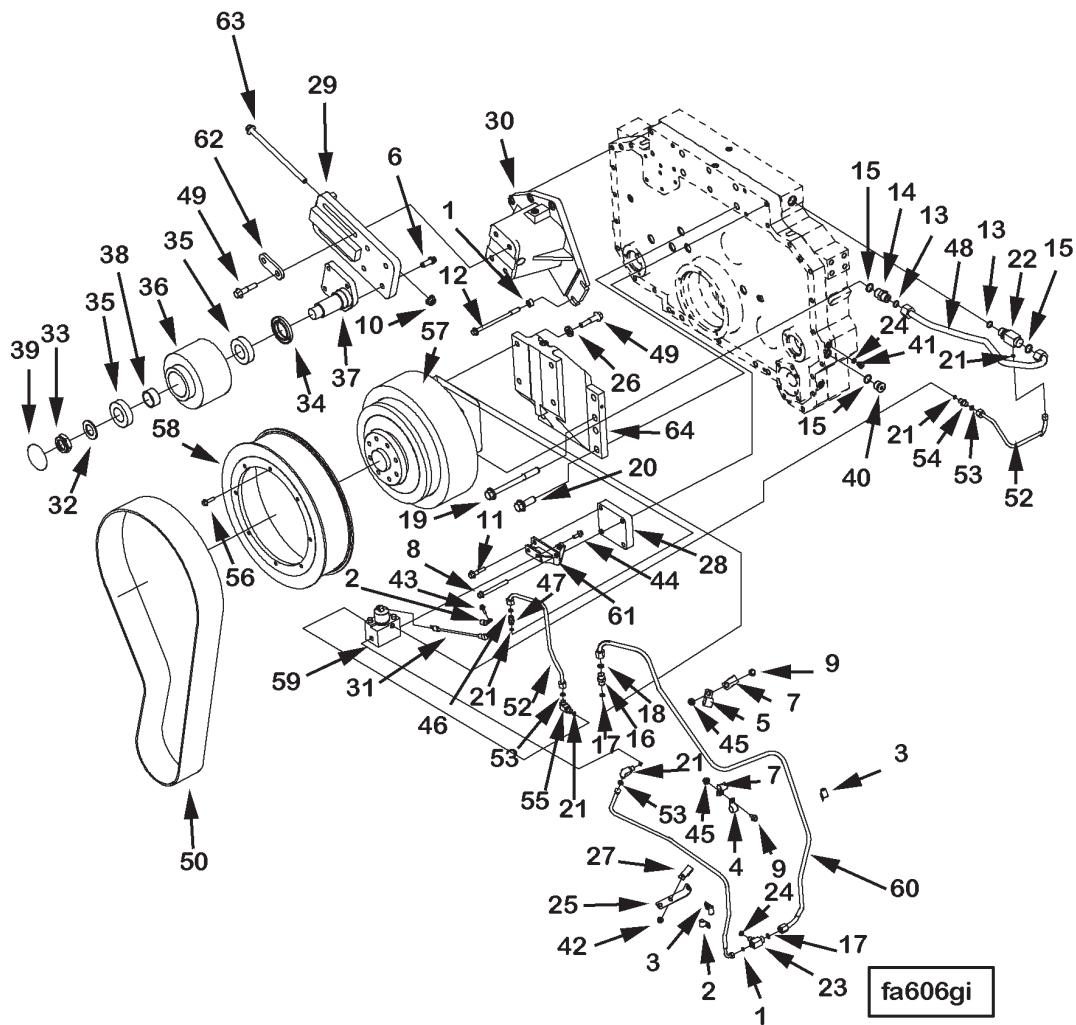


Group No. 08.03

## Drive,Fan

Option No. FA6192

Ref No.	Part Number	Part Name	Req	Remarks
		DRIVE,FAN OPTION FA6192		Drive, fan  Fan Center Distance To Crank Centerline: 700mm (27.6in) offset from centerline of crank: 0mm type of drive: 8 bolt belt description: 23 l belt included: Yes Drive Ratio: .42:1 Crank Pulley Diameter: 215mm distance of fan mounting surface from Front Of Block: 630.5mm Fan Pulley Diameter: 513mm type of fan hub: Variable viscous clutch Method Of Tensioning: Manual Backside Idler tensioner included: Yes fan drive limitations: Maximum Horsepower: 150 HP Maximum Torque Capability: TBD Maximum Fan Inertia: (In- LB/sce**) TBD maximum bending movement on fan hub mounting surface: (Inlb) TBD Maximum Fan Weight: (LB) TBD Maximum Fan Spacer Length: 0mm special installation requirements: Fan mounting bolts must be grade 10.9 as per ces12107 Unique Characteristics: Fan mounting is an 8 bolt pattern bolt pattern is m16 x 2 tapped holes on a 5- 3/4in. (146mm) bolt circle.
1	66747	Spacer, Mounting	2	
2	68152	Clip	2	
3	68152 B	Clip	4	
4	69911 A	Clip	1	
5	107460	Clip	1	
6	206391	Screw, Twelve Point Cap	4	
7	216848	Clip	2	
8	3089563	Screw, Hex Flange Head Cap	1	
9	3093957	Screw, Hex Flange Head Cap	2	
10	3171181	Nut, Hexagon Flange	1	
11	3171713	Screw, Hex Flange Head Cap	2	
12	3171715	Screw, Hex Flange Head Cap	2	
	3171722	Union, Male	1	
13	3085709	Seal, O Ring	1	
14	(3171723)	Union, Male	1	
15	3678606	Seal, O Ring	1	
	3331873	Union, Male	1	
16	(3331838)	Union, Male	1	
17	3627695	Seal, O Ring	1	
18	3678786	Seal, O Ring	1	
19	3332174	Screw, Hex Flange Head Cap	4	
20	3332175	Screw, Hex Flange Head Cap	2	
	3410781	Tee, Male Union	1	
13	3085709	Seal, O Ring	1	
21	3089392	Seal, O Ring	1	
22	(3410367)	Tee, Male Run	1	
15	3678606	Seal, O Ring	1	
	3410782	Tee, Male Union	1	
21	3089392	Seal, O Ring	1	
23	(3410368)	Tee, Male Union	1	
17	3627695	Seal, O Ring	1	
24	3678912	Seal, O Ring	1	



Group No. 08.03

Drive,Fan

Option No. FA6192

Ref No.	Part Number	Part Name	Req	Remarks
25	3411085	Bracket, Water Tube	1	
26	3628745	Washer, Plain	4	
27	3629516	Clip	1	
28	3635316	Spacer, Mounting	1	
29	3636278	Plate, Clamping	1	
30	3636285	Bracket, Idler Pulley	1	
31	3637075	Harness, Wiring	1	
	3638640	Pulley, Idler Assembly	1	
32	205168	Washer, Plain	1	1 1/2 Inch.
33	206506	Nut, Lock	1	
34	3048625	Seal, Oil	1	
35	3048626	Bearing, Roller	2	
36	3637487	Pulley, Idler	1	
37	3637488	Shaft, Fan Hub	1	
38	3637489	Spacer, Bearing	1	
39	4101292	Plug, Expansion	1	
	3678611	Plug, Threaded	1	
40	(3678605)	Plug, Threaded	1	
15	3678606	Seal, O Ring	1	
	3678921	Plug, Threaded	1	
24	3678912	Seal, O Ring	1	
41	(3678922)	Plug, Threaded	1	
42	3900589	Nut, Hexagon Flange	1	M8 X 1.25
43	3900630	Screw, Hex Flange Head Cap	1	M8 x 1.25 x 20
44	3902460	Screw, Hex Flange Head Cap	2	M10 x 1.50 x 25
45	3902662	Nut, Hexagon Flange	2	M10 x 1.50
	4000730	Union, Male	1	
21	3089392	Seal, O Ring	1	
46	3678603	Seal, O Ring	1	
47	(4000728)	Union, Male	1	
48	4001213	Hose, Flexible	1	
49	4001226	Screw, Hex Flange Head Cap	8	
50	4015784	Belt, V Ribbed	1	
51	4015817	Hose, Flexible	1	
52	4015819	Hose, Flexible	2	
	4016277	Union, Male	1	
53	3037537	Seal, O Ring	1	
21	3089392	Seal, O Ring	1	
54	(4016278)	Union, Male	1	
	4016279	Elbow, Male Union	2	
53	3037537	Seal, O Ring	1	
21	3089392	Seal, O Ring	1	
55	(4016280)	Elbow, Male Union	1	
	4017548	Clutch, Fan TLA	1	
56	3093805	Screw, Hex Flange Head Cap	8	M10 x 1.50 x 35.
57	(4016984)	Clutch, Fan	1	
58	(4016985)	Pulley, Fan Clutch	1	
59	4066810	Solenoid	1	
60	4080262	Hose, Flexible	1	
61	4086160	Bracket, Solenoid	1	
62	4101256	Spacer, Mounting	2	
63	4101288	Screw, Hex Flange Head Cap	1	
64	4917006	Bracket, Fan	1	



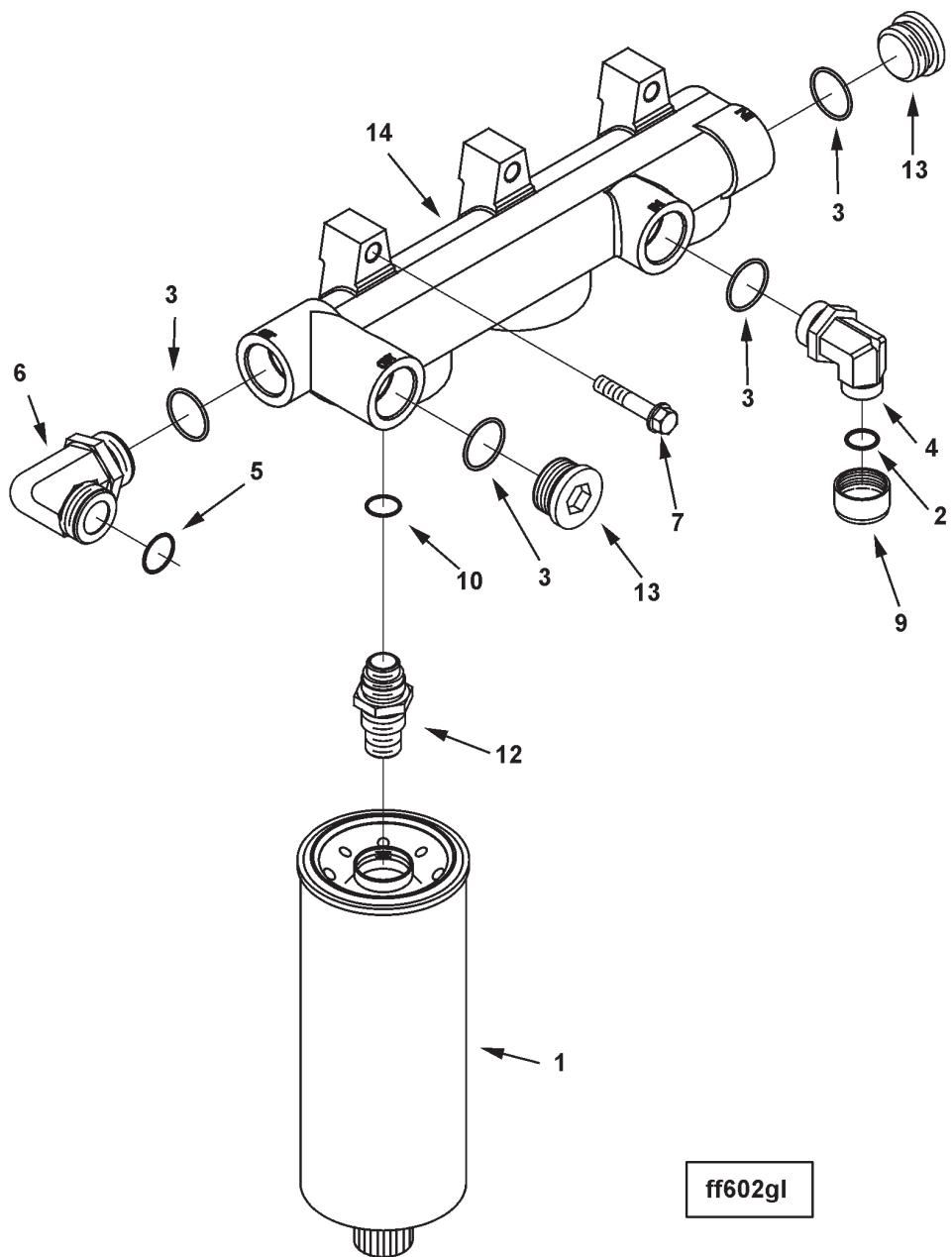
Ref No.	Part Number	Part Name	Req	Remarks
1	3680437	MOUNTING,FAN DRIVE OPTION FA6730  Screw, Hex Flange Head Cap	2	Fan drive mounting condition 1 fan clutch mounting provision:  Rockford fan clutch Belt Tensioner Mounted: Yes alternator belt guard mounted: No condition 2 fan clutch mounting provision: None Belt Tensioner Mounted: Yes alternator belt guard mounted: Yes alternator manufacturing/ model: Delco Remy 33 SI450 condition 3 fan clutch mounting provision: Rockford fan clutch Belt Tensioner Mounted: Yes alternator belt guard mounted: Yes alternator manufacturing/ model: Prestolite/8 SC3009 z; Niehoff/c653 a-1; Prestolite/bdl3314.

Group No. 99.01

**CALIBRATION,FUEL PUMP**

Option No. FCBS79

Ref No.	Part Number	Part Name	Req	Remarks
		<b>CALIBRATION,FUEL PUMP OPTION FCBS79</b>		Fuel pump calibration adv/rated power: 2500 BHP at 1900 RPM  Peak torque: 7257 FT LB at 1500 RPM Governed Power: 2500 BHP At 1900 RPM CPL: 2848 Certified By: EPA ,CARB cal restr: None Power Rating: N/A Engine Control System: HPI Application: Nonroad cert level: Tier 2,tier 2 manufacturer of record: Komatsu special allowance: Tpem do option: Do 6631.

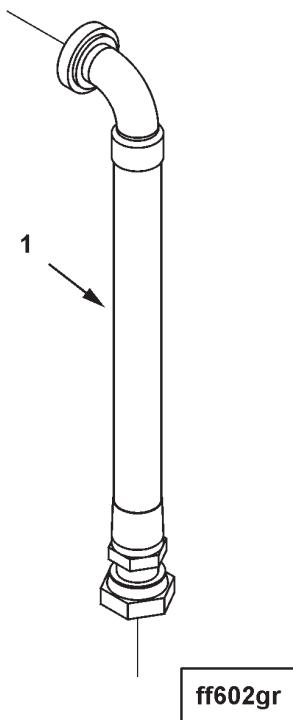


Group No. 06.04

**Fuel Filter**

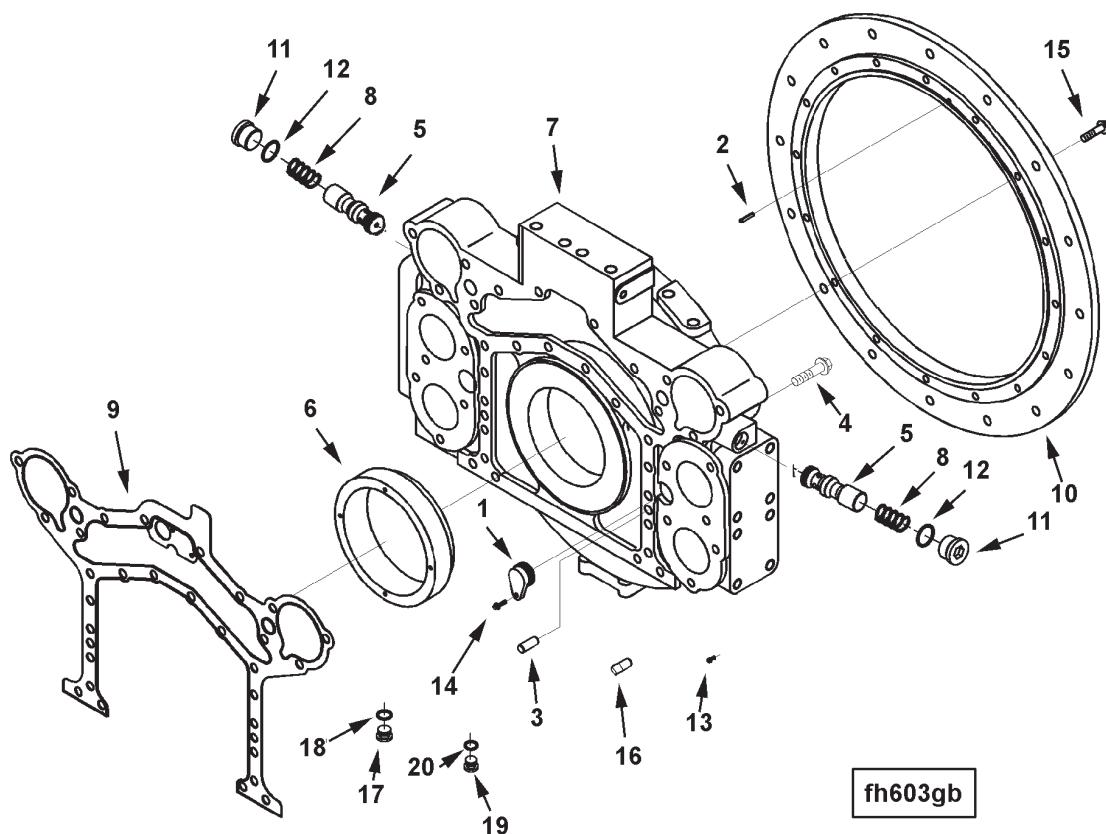
Option No. FF6074

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>FUEL FILTER OPTION FF6074</b>		Fuel filter Element Type: Spin-On Number Of Elements: 3 with water separator: Yes mounting location: Left bank side of engine In the rear position absolute filtration measure in micron: 10 inlet fitting description: 1 7/16-12 un-16 orfs to SAE j1453 outlet fitting descrip- tion: 1 11/16-12 un- 20 orfs to SAE j1453 fitting orientation: Down. Buy from Cummins Filtration
1	3089916 3332349	Separator, Fuel Water Elbow, Male Union	3 1	
2	3075658	Seal, O Ring	1	
3	3089019	Seal, O Ring	1	
4	(3332350) 3410392	Elbow, Male Union Elbow, Male Union	1 1	
3	3089019	Seal, O Ring	1	
5	3332160	Seal, O Ring	1	
6	(3410393)	Elbow, Male Union	1	
7	3905372	Screw, Hex Flange Head Cap	3	M12 x 1.75 x 60
9	4017295	Cover, Protective	1	
	3640341	Head, Fuel Filter	1	
10	4975427	Seal, O Ring	3	
12	3010635 3089023	Adapter, Filter Head Plug, Threaded	3 2	
3	3089019 (3089021)	Seal, O Ring Plug, Threaded	1 1	M42 x 2
14	4916702	Head, Fuel Filter	1	



Ref No.	Part Number	Part Name	Req	Remarks
1	3639985	<b>FUEL FILTER PLUMBING OPTION FF6765</b>  Hose, Flexible	1	Plumbing, fuel filter for application with: A) no compressor b) twin cylinder compressor c) single cylinder compressor with fuel filter head in forward position.

## NOTES

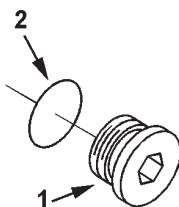


Group No. 16.01

**Flywheel Housing**

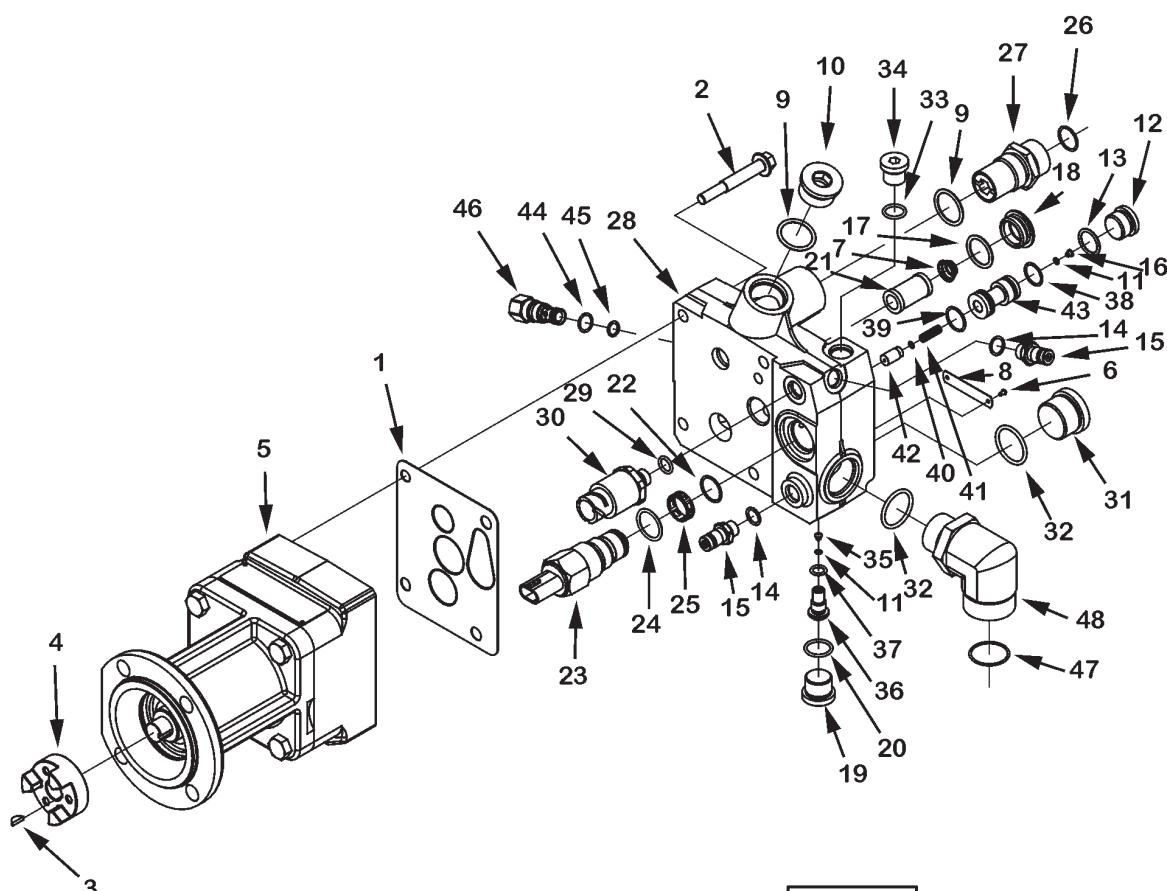
Option No. FH6044

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>FLYWHEEL HOUSING OPTION FH6044</b>		
1	3010410	Cover, Access Hole	2	
2	3033629	Pin, Roll	2	
3	3089327	Dowel, Pin	1	
4	3089328	Screw, Hex Flange Head Cap	30	
5	3089330	Plunger, Prs Regulator	2	
6	4100625	Seal, Oil	1	
7	4001506	Housing, Flywheel	1	
8	3331976	Spring, Compression	2	
9	4006223	Gasket, Flywheel Housing	1	
10	4001206	Adapter, Transmission	1	
	3678838	Plug, Threaded	2	
11	(3678845)	Plug, Threaded	1	
12	3678846	Seal, O Ring	1	
13	3900626	Screw, Hex Flange Head Cap	6	M6 X 1.00 X 12.
14	3901865	Screw, Hex Flange Head Cap	2	M6 X 1.00 X 20.
15	3902116	Screw, Hex Flange Head Cap	16	M12 X 1.75 X 50.
16	4080164	Dowel, Diamond	1	
	3089238	Plug, Threaded	3	M22 x 1.50
17	(3089239)	Plug, Threaded	1	M22 x 1.50
18	3089240	Seal, O Ring	1	
	3678921	Plug, Threaded	4	
19	(3678922)	Plug, Threaded	1	
20	3678912	Seal, O Ring	1	

**fh603ga**

Ref No.	Part Number	Part Name	Req	Remarks
1 2	3089238 (3089239) 3089240	<b>FLYWHEEL HOUSING PLUMBING OPTION FH6702</b>  Plug, Threaded Plug, Threaded Seal, O Ring	1 1 1	Flywheel housing plumbing mag pickup included: No threaded plugs: Four.  M22 x 1.50 M22 x 1.50

## NOTES

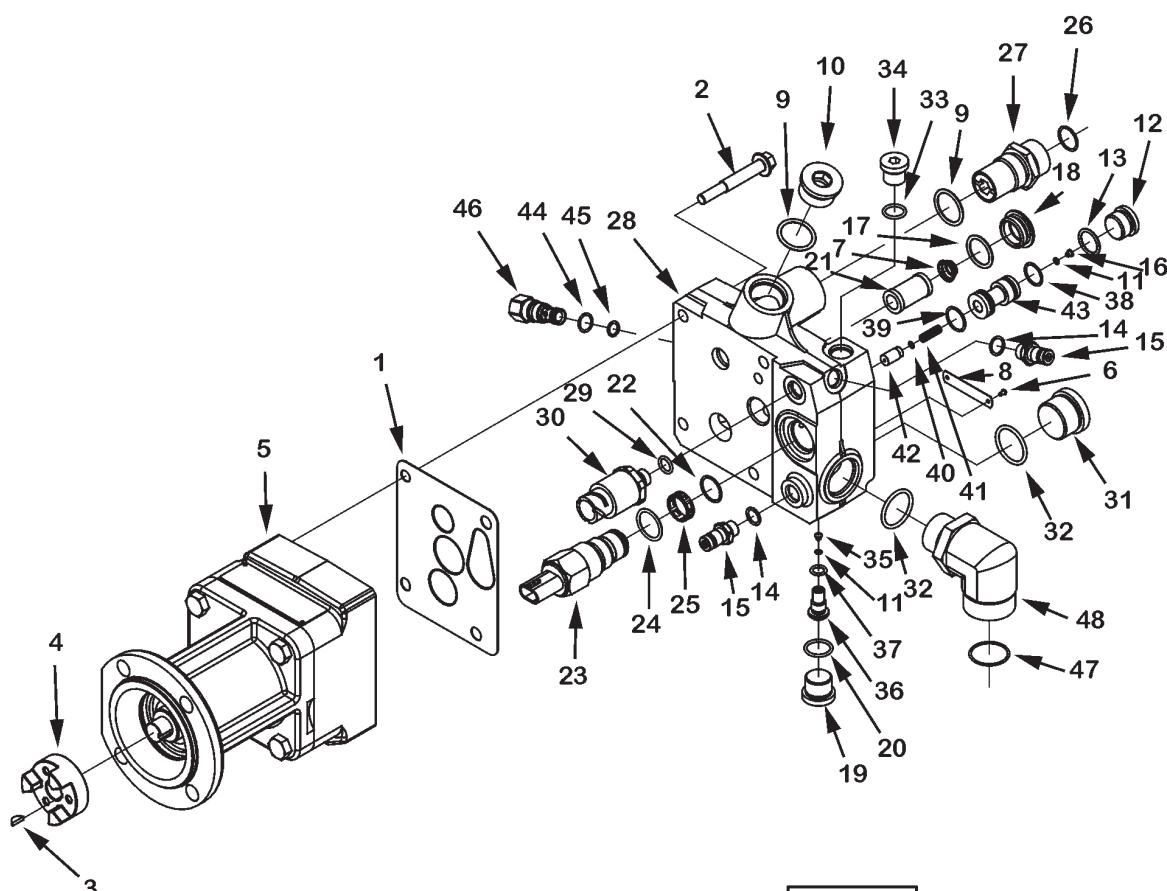


Group No. 05.01.4

**Fuel,Pump**

Option No. FP6864

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>PUMP,FUEL OPTION FP6864</b>		
				Fuel pump manufacturer/model: Imo (21mm imo gears)
				Governor Type: Electronic magnetic pick up included: No
				Check Valves: Yes direction of rotation gear pump: RH outlet orientation: Straight
				Application: Qsk60-G All Ratings qsk60-c all ratings qsk60-marine all ratings.
1	4088186	Pump, Fuel	1	
1	3348583	Gasket, Prs Rgl Valve	1	
2	3904446	Screw, Hex Flange Head Cap	4	M10 x 1.50 x 70
	(4062159)			
3	S 306	Pump, Gear Fuel	1	
4	4061677	Key, Plain Woodruff	1	
5	(4903527)	Hub, Jaw Coupling	1	
	(4088182)	Pump, Fuel	1	
6	S 2286	Valve, Pressure Regulator	1	
7	70700	Screw, Drive	2	
8	105375	Spring, Compression	1	
	3040818	Nameplate	1	
9	3035228	Plug, Threaded	1	1 3/16 - 12 un.
10	(3040819)	Seal, O Ring	1	
11	173086	Plug, Threaded	1	
	3040815	Gasket, Injector	1	
12	(3040816)	Plug, Threaded	1	7/18 - 14 UNF.
13	3040817	Seal, O Ring	1	
	3040818	Plug, Threaded	1	1 3/16 - 12 un.
9	3035228	Seal, O Ring	1	
10	(3040819)	Plug, Threaded	1	
	3042619	Nipple, Coupling	2	
14	3037537	Seal, O Ring	2	
15	3042620	Nipple, Coupling	2	
16	3045045	Plug, Injector Orifice	1	
17	3046943	Seal, O Ring	1	
18	3080223	Cap, Fuel Pump Filter	1	
	3089238	Plug, Threaded	1	
19	(3089239)	Plug, Threaded	1	
20	3089240	Seal, O Ring	1	
21	3090769	Screen, Filter	1	
	3330600	Actuator, Etr Fuel Control	1	
22	3042542	Seal, O Ring	1	
23	(3331029)	Actuator, Etr Fuel Control	1	
24	3865398	Seal, O Ring	1	
25	3867393	Screen, Filter	1	
	3348444	Valve, Check	1	
9	3035228	Seal, O Ring	1	
26	3328589	Seal, O Ring	1	
27	(4001945)	Valve, Check	1	
28	3348458	Body, Prs Regulator Valve	1	
	3408566	Sensor, Pressure	1	Fuel pump.
29	3330202	Seal, O Ring	1	
30	(3408567)	Sensor, Pressure	1	
	3408566	Sensor, Pressure	1	Fuel pump.
29	3330202	Seal, O Ring	1	
30	(3408567)	Sensor, Pressure	1	
	3678838	Plug, Threaded	1	
31	(3678845)	Plug, Threaded	1	
32	3678846	Seal, O Ring	1	

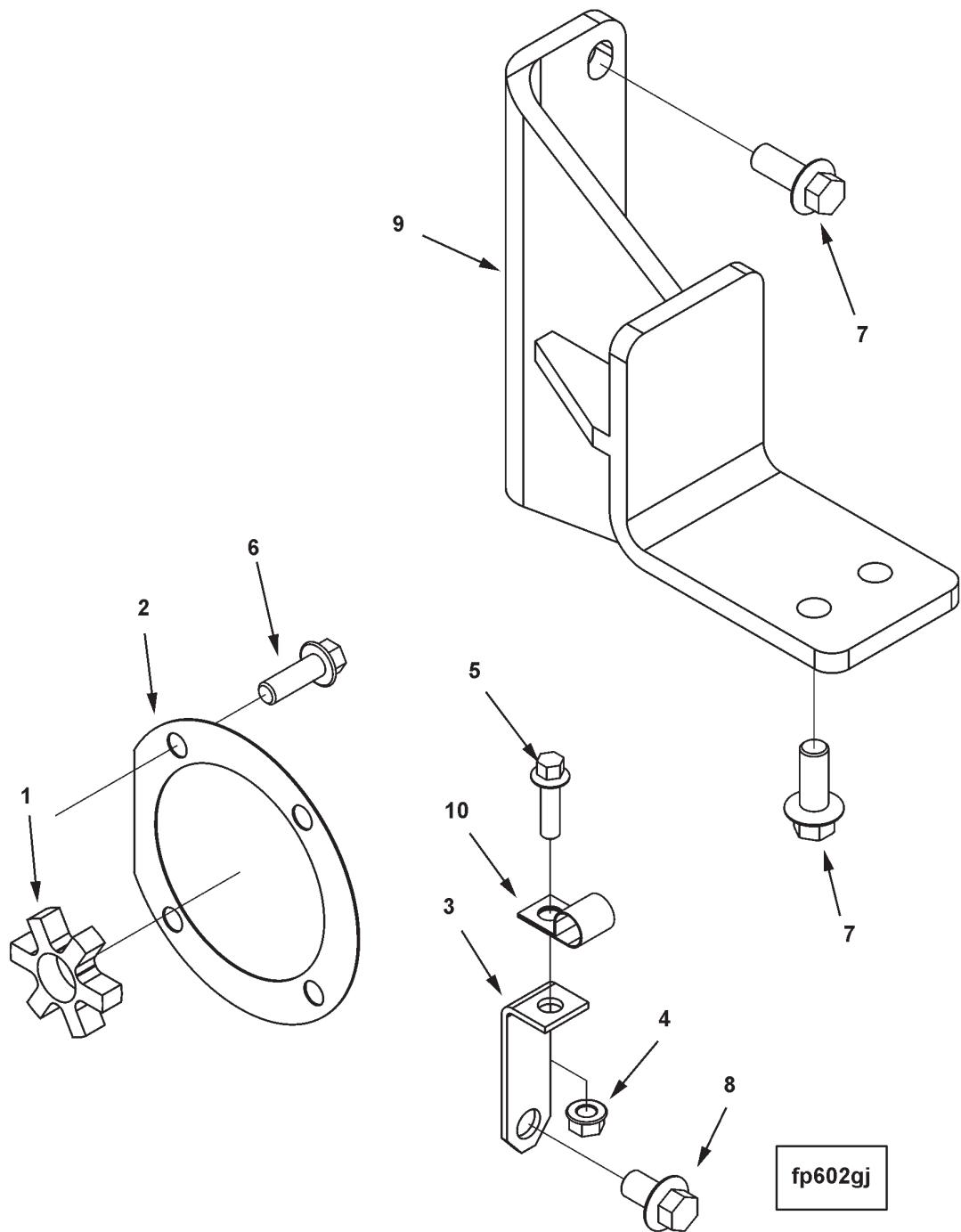


Group No. 05.01.4

**Fuel,Pump**

Option No. FP6864

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
33	3678873	Plug, Threaded	3	
	3678786	Seal, O Ring	3	
34	(3678791)	Plug, Threaded	3	
	3867737	Valve, Pressure Relief	1	
11	173086	Gasket, Injector	1	
35	3045012	Plug, Injector Orifice	1	
36	(3329676)	Valve, Pressure Relief	1	
37	3417238	Seal, O Ring	1	
	4001756	Valve, Pressure Regulator	1	
38	3045986	Seal, O Ring	1	
39	3066914	Seal, O Ring	1	
40	3071719	Shim	1	
41	(3867668)	Spring, Compression	1	
42	(4001751)	Plunger, Ful Prs Regulator	1	
43	(4001757)	Barrel, Control Valve	1	
	4002080	Valve, Pressure Regulator	1	
44	3348703	Seal, O Ring	1	
45	3867640	Seal, O Ring	1	
46	(4002081)	Valve, Pressure Regulator	1	
	4007074	Elbow, Male Union	1	
47	3332160	Seal, O Ring	1	
32	3678846	Seal, O Ring	1	
48	(4007073)	Elbow, Male Union	1	



Group No. 09.01

**Fuel Pump Coupling**

Option No. FP6869

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>FUEL PUMP COUPLING OPTION FP6869</b>		
1	3046200	Spider, Jaw Coupling	1	
2	3331821	Gasket, Fuel Pump	1	
3	3628554	Brace, Tube	1	
4	3900589	Nut, Hexagon Flange	1	M8 X 1.25.
5	3900630	Screw, Hex Flange Head Cap	1	M8 X 1.25 X 20.
6	3903112	Screw, Hex Flange Head Cap	4	M10 x 1.50 x 30.
7	3910495	Screw, Hex Flange Head Cap	4	M12 X 1.75 X 30.
8	3913372	Screw, Hex Flange Head Cap	1	M12 X 1.75 X 20.
9	4000898	Bracket, Pump	1	
10	4100552	Clip	1	

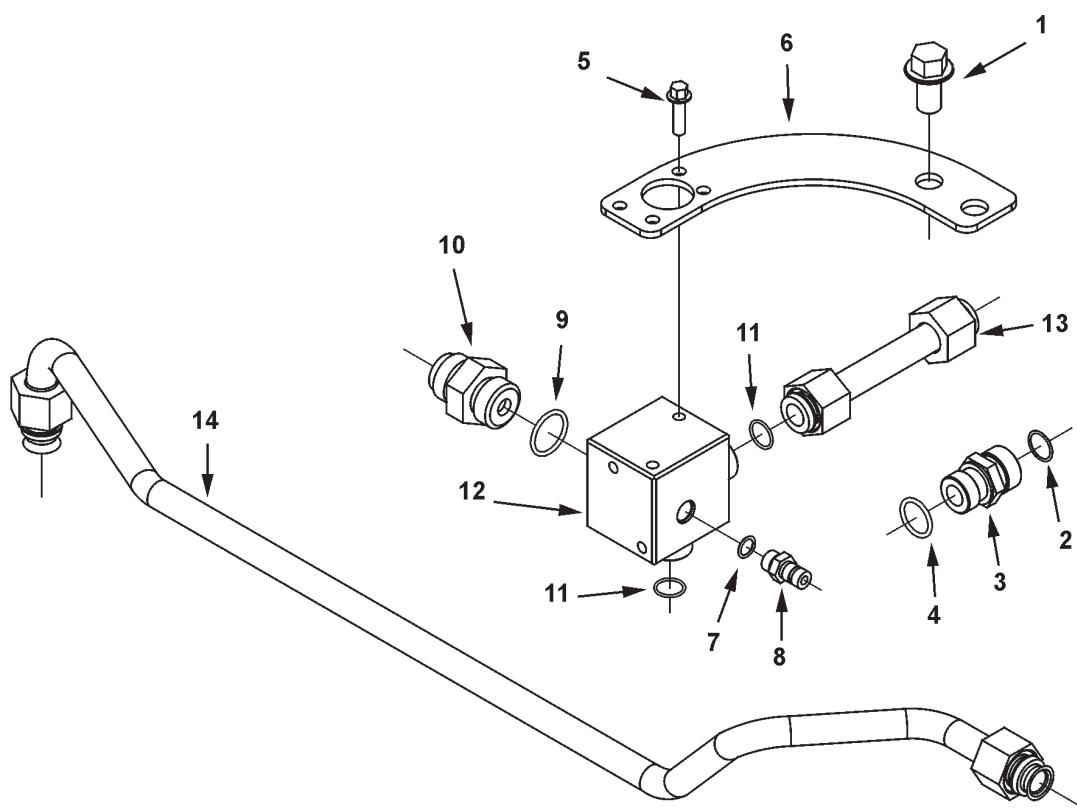
Group No. 99.01

**RATING,FUEL**

Option No. FR6329

Ref No.	Part Number	Part Name	Req	Remarks
		<b>RATING,FUEL OPTION FR6329</b>		Advertised Power: N/A rated horsepower: 2500 BHP at 1900 RPM maximum power: N/A  Peak torque: 7257 FT LB at 1500 RPM Governed Power: N/A Governed Torque: N/A High Idle: N/A Low Idle: N/A rated speed: 1900 RPM Engine Control System: HPI CPL: 2848,2849 Certified By: None Application: Nonroad Certification Level: None special allowance: Tpem.

## NOTES

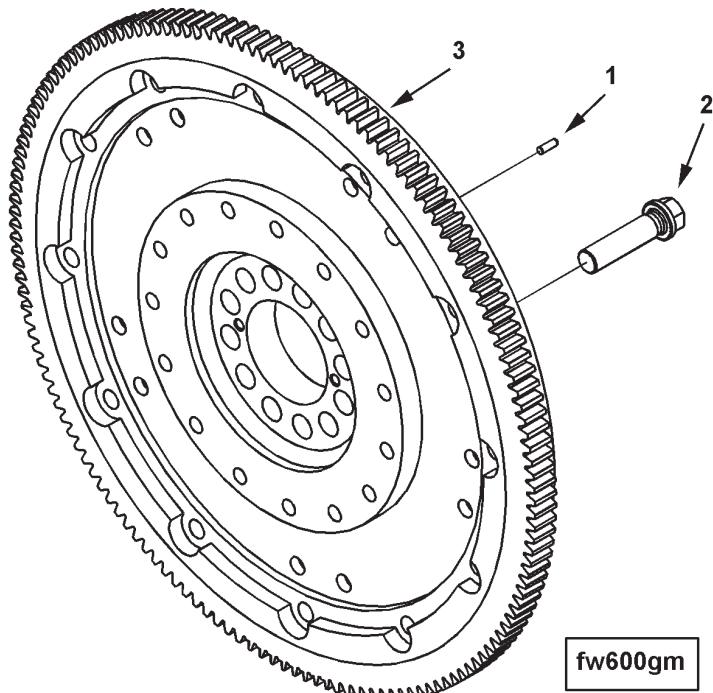


Group No. 06.03

**Plumbing,Fuel**

Option No. FT60784

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>PLUMBING,FUEL OPTION FT60784</b>		
1	3089324 3171722	Screw, Hex Flange Head Cap Union, Male	2 2	
2	3085709	Seal, O Ring	1	
3	3171723	Union, Male	1	
4	3678606	Seal, O Ring	1	
5	3900630	Screw, Hex Flange Head Cap	2	
6	3641308 4001157 3042619 3037537	Brace, Tube Valve, Check Nipple, Coupling Seal, O Ring	1 1 1 1	M8 X 1.25 X 20.
7	3042620	Nipple, Coupling	1	
8	4000877	Valve, Check	1	
9	3678846	Seal, O Ring	1	
10	4000878	Valve, Check	1	
	4085926	Tee, Tube Connector	1	
11	3328589	Seal, O Ring	2	
12	4080556	Connector, Tube	1	
13	4001224	Tube, Fuel Drain	1	
14	4917020	Tube, Fuel Drain	1	

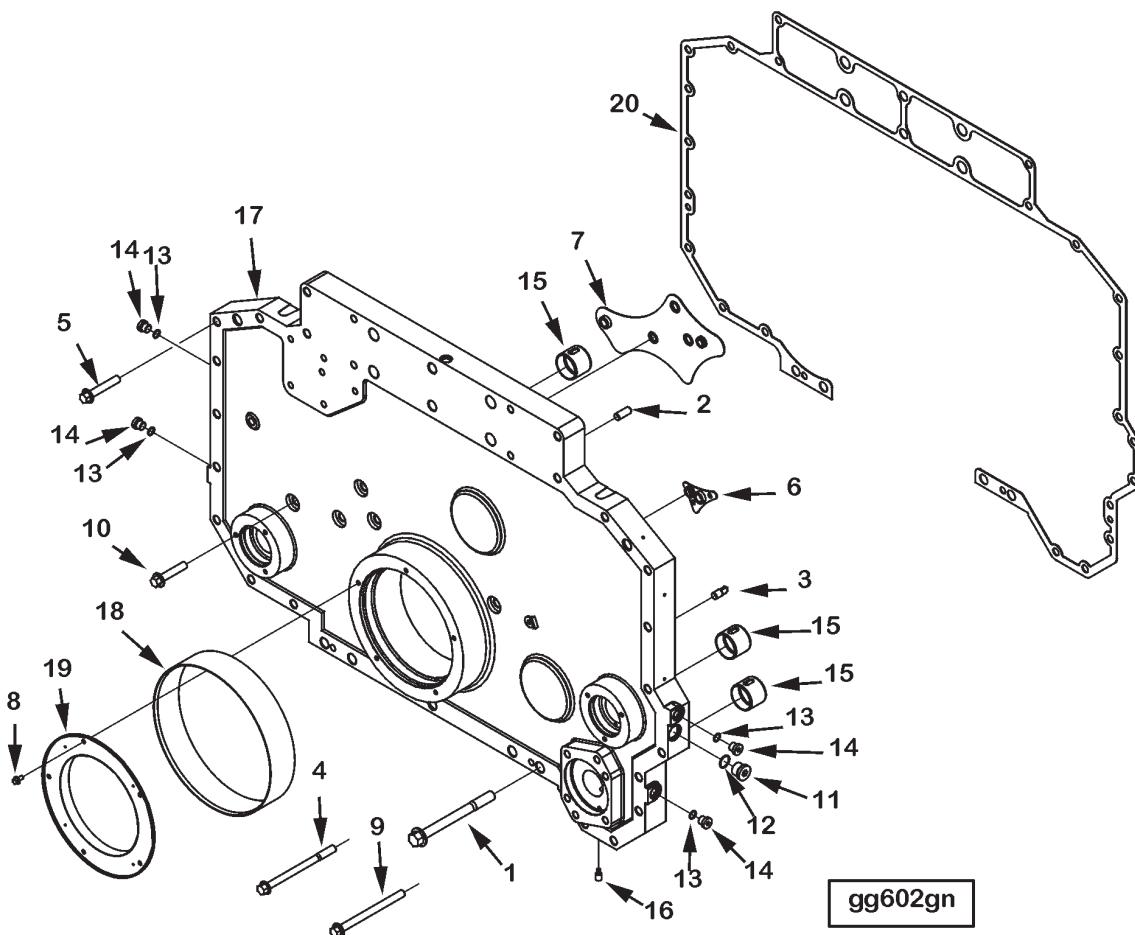


Group No. 16.02

**Flexplate**

Option No. FW6040

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>FLEXPLATE OPTION FW6040</b>		Flexplate  Customer Supplied: No Pilot bore outside diameter 479.4mm. Intended Housing: SAE 0 Starter Center Distance: 341.305mm. Diametrical pitch of ring gear: 630.83mm. Ring gear tooth count:149 Speed limitaion: 3500 RPM
1	131584	Pin, Roll	1	
2	3089127	Screw, Hex Flange Head Cap	12	
3	3171332	Flexplate	1	

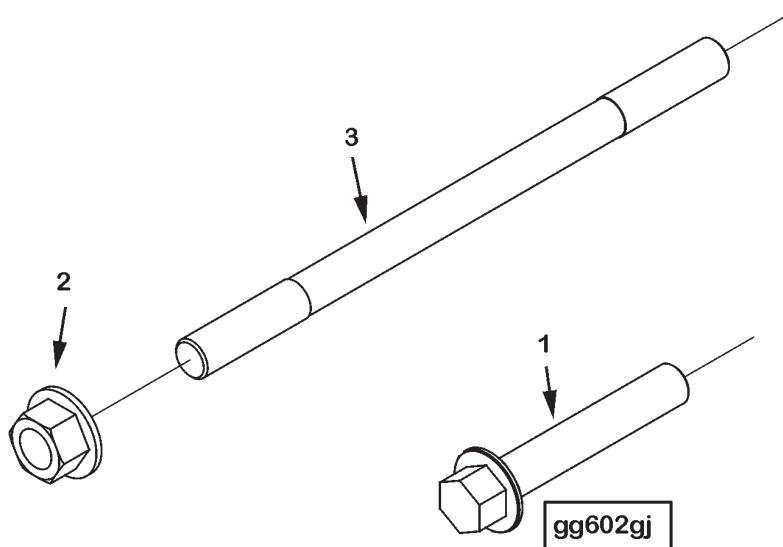


Group No. 01.06

**Cover,Front Gear**

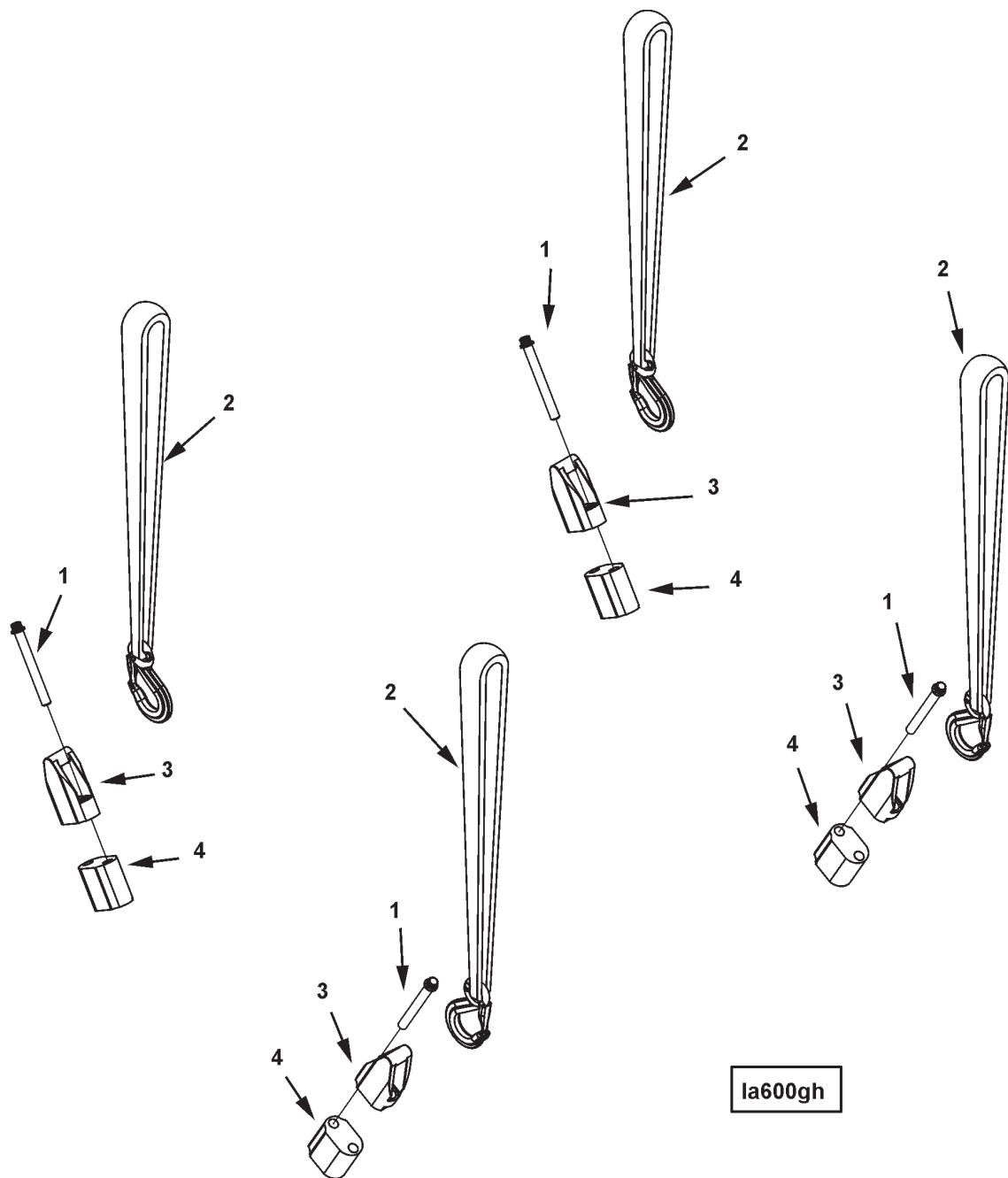
Option No. GG6815

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>COVER,FRONT GEAR OPTION GG6815</b>		
1	3089296	Screw, Hex Flange Head Cap	6	
2	3089378	Dowel, Pin	1	
3	3089379	Dowel, Diamond	1	
4	3089592	Screw, Hex Flange Head Cap	1	
5	3278480	Screw, Hex Flange Head Cap	11	
6	3331969	Gasket, Spacer	1	M12 X 1.75 X 70.
7	3331970	Gasket, Spacer	1	
8	3900626	Screw, Hex Flange Head Cap	5	M6 X 1.00 X 12.
9	3903105	Screw, Hex Flange Head Cap	2	M12 X 1.75 X 150.
10	3905372	Screw, Hex Flange Head Cap	1	M12 X 1.75 X 60.
	4066254	Cover, Gear	1	
	3089238	Plug, Threaded	1	
11	(3089239)	Plug, Threaded	1	
12	3089240	Seal, O Ring	1	
	3678921	Plug, Threaded	4	
13	3678912	Seal, O Ring	1	M14 x 1.50
14	(3678922) (4101324)	Plug, Threaded	1	
	3089454	Cover, Gear	1	
15	3640776	Bushing	3	
16	(4016504)	Seal, Tamper Proof	3	
17	4101322	Cover, Gear	1	
18	4100624	Bushing	1	
19	4100983	Seal, Oil	1	
20		Gasket, Gear Cover	1	



Ref No.	Part Number	Part Name	Req	Remarks
1 2 3	3278480 3903210 4017427	MOUNTING,GEAR COVER OPTION GG6827  Screw, Hex Flange Head Cap Nut, Hexagon Flange Stud	1 2 2	Gear cover mounting  Engine Family: Qsk45/60 Reference comp bracket mounting provision: Yes alternator bracket mounting provision: 4 bolt pattern fan idler bracket mounting provision: Yes fan centers (mm): 700 (27.61 in),550 (21.65in) shock absorber provision: No.  M12 X 1.75 X 70. M12 X 1.75.

## NOTES

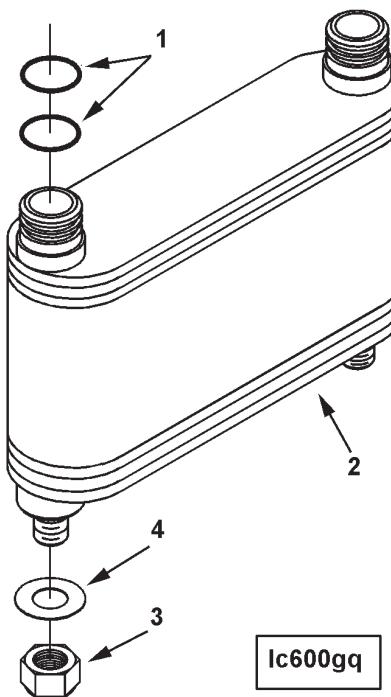


Group No. 17.06

**Bracket,Lifting**

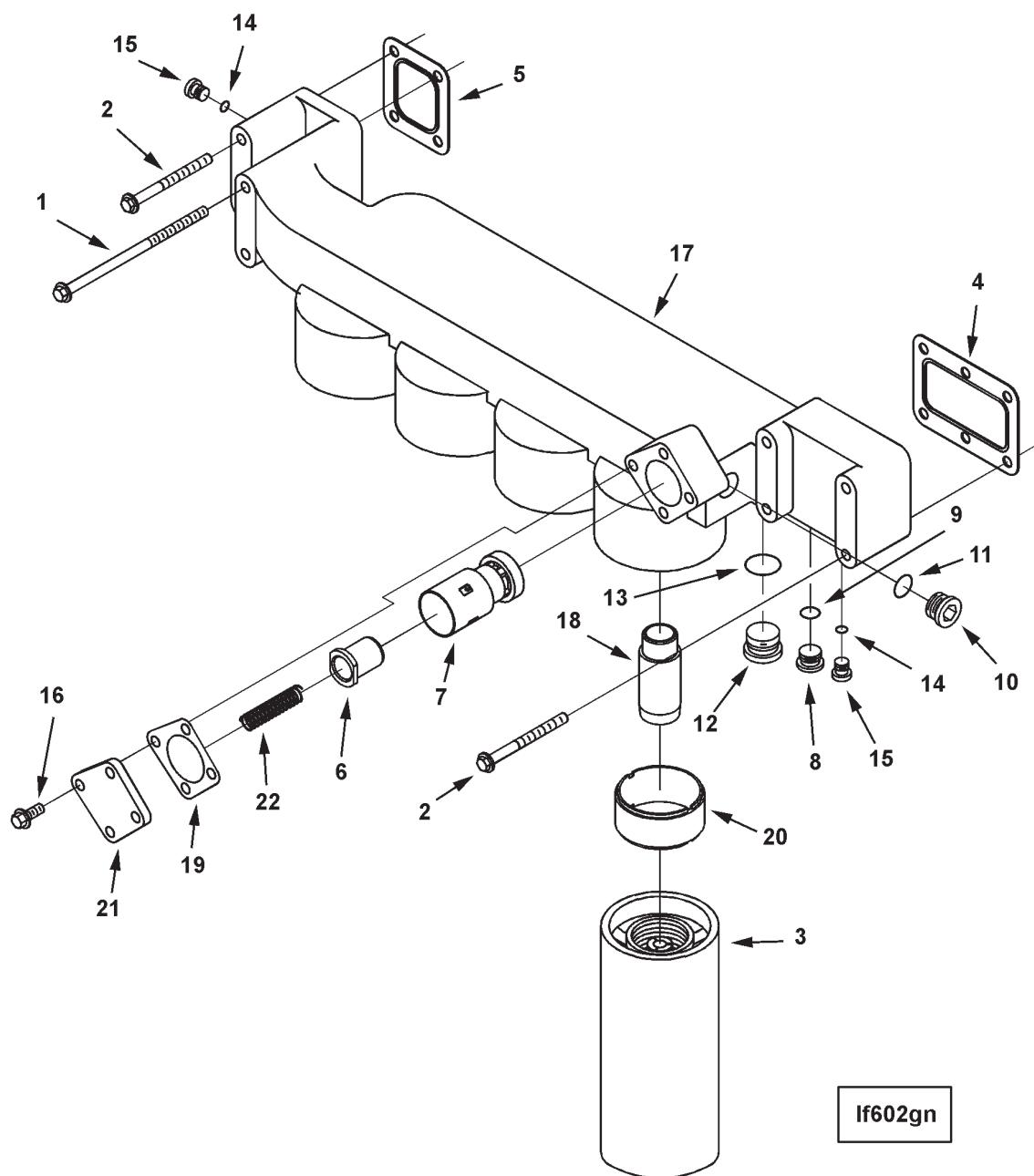
Option No. LA6706

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>BRACKET,LIFTING OPTION LA6706</b>		Lifting bracket no of lifting brackets: 4 for qsk60: Front bracket location: RB between cylinder 2 and 3 LB between cylinder 1 and 2 rear bracket location: RB between cylinder 7 and 8 LB between cylinder 6 and 7 for qsk45: Front bracket location: RB between cylinder 1 and 2 LB between cylinder 1 and 2 rear bracket location: RB between cylinder 5 and 6 LB between cylinder 5 and 6.
1	3089194	Screw, Twelve Point Cap	8	
2	3411202	Cable	4	
3	3411232	Bracket, Lifting	4	
4	4016700	Spacer, Mounting	4	



Ref No.	Part Number	Part Name	Req	Remarks
		<b>ENGINE OIL COOLER OPTION LC6702</b>		
1	212161	Seal, O Ring	16	Engine oil cooler
2	4101011	Core, Cooler	4	
3	3089271	Nut, Lock	8	
4	3630969	Gasket, Lub Oil Clr Cover	8	

## NOTES

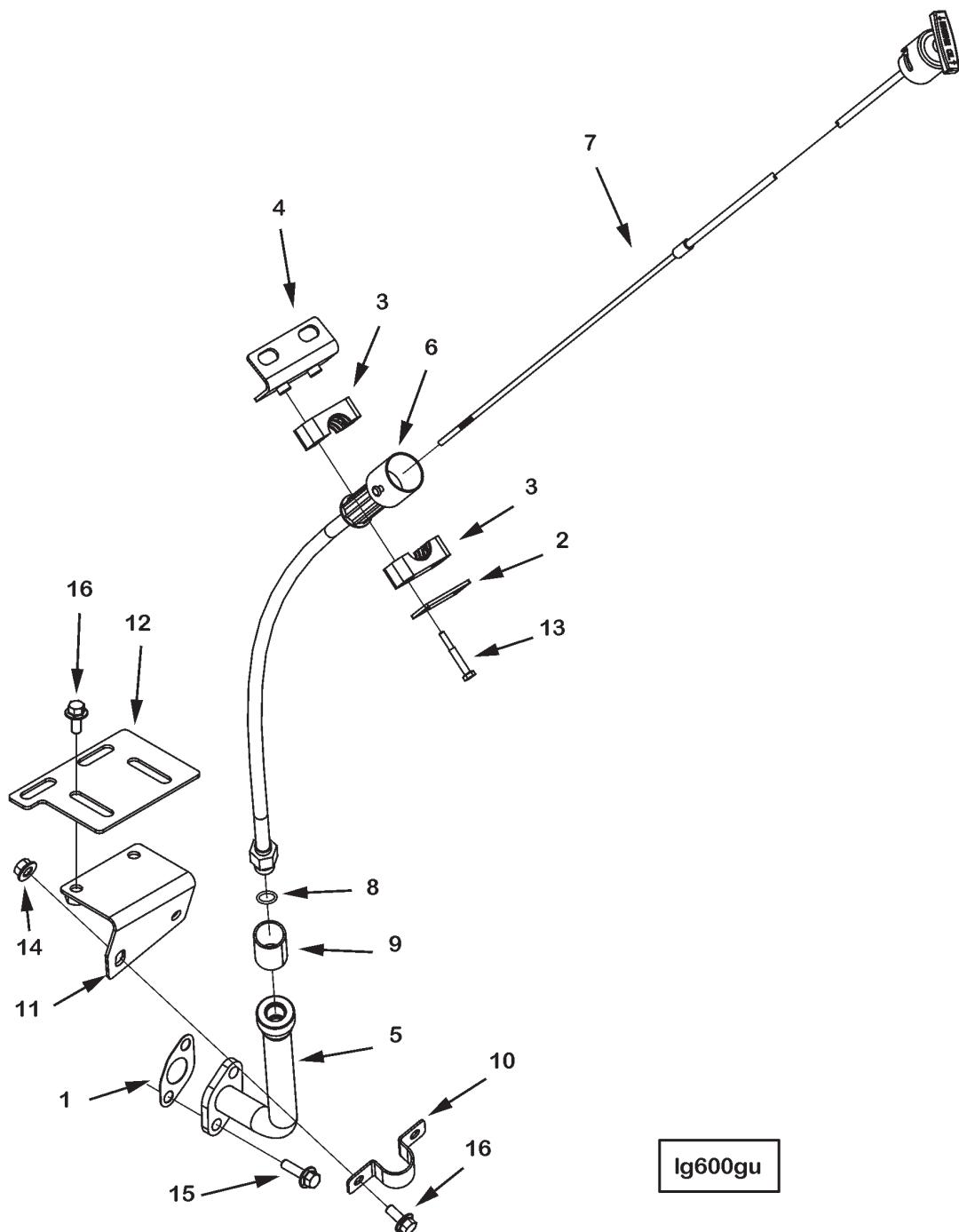


Group No. 07.03

**Full Flow Oil Filter**

Option No. LF6068

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>FULL FLOW OIL FILTER OPTION LF6068</b>		Combination full flow/bypass oil filter Element Type: Venturi Combo LF9024 No. of elements: 4 mounting location: RB bypass provision: Yes One piece filter head For use on q60 industrial and generator drive engines.
1	4001378	Screw, Hex Flange Head Cap	2	
2	3922863	Screw, Hex Flange Head Cap	6	M10 x 1.50 x 110.
3	4920071	Filter, Lubricating Oil	4	
4	4066135	Gasket, Filter Head	1	
5	4066136	Gasket, Filter Head	1	
	4100476	Head, Lub Oil Filter	1	
6	3021618	Plunger, Prs Regulator	1	
7	3028552	Body, Bypass Valve	1	
	3089238	Plug, Threaded	1	
8	(3089239)	Plug, Threaded	1	
9	3089240	Seal, O Ring	1	
	3678611	Plug, Threaded	1	
10	(3678605)	Plug, Threaded	1	
11	3678606	Seal, O Ring	1	
	3678838	Plug, Threaded	1	
12	(3678845)	Plug, Threaded	1	
13	3678846	Seal, O Ring	1	
	3678921	Plug, Threaded	6	
14	3678912	Seal, O Ring	1	
15	(3678922)	Plug, Threaded	1	
16	3902460	Screw, Hex Flange Head Cap	4	M10 x 1.50 x 25
17	3639810	Head, Lub Oil Filter	1	
18	4066190	Adapter, Filter Head	4	
19	4100474	Gasket, Cover Plate	1	
20	4066192	Adapter, Filter Head	4	
21	4066194	Plate, Cover	1	
22	4066195	Spring, Compression	1	

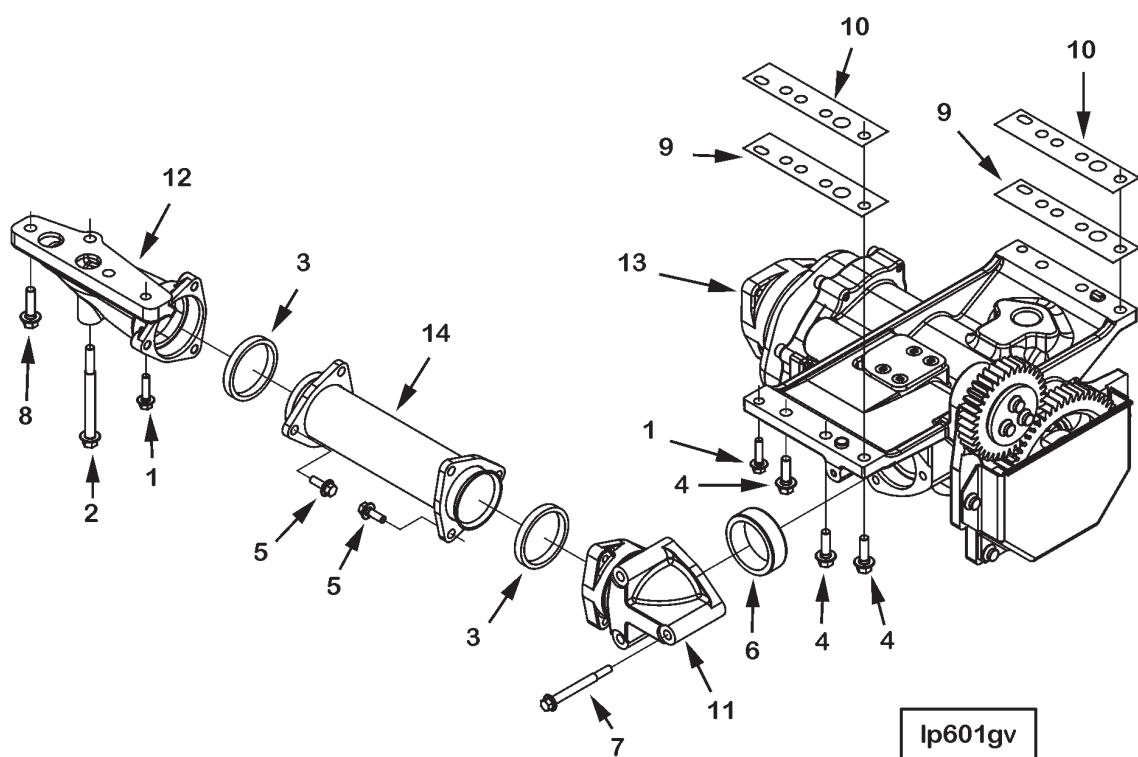


Group No. 07.02

**Location,Oil Level Gauge**

Option No. LG6060

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>LOCATION,OIL LEVEL GAUGE OPTION LG6060</b>		
1	3636373	Gasket, Connection	1	
2	3636623	Plate, Cover	1	
3	3636624	Clamp, Retaining	2	
4	3640698	Bracket, Oil Tube	1	
5	3636980	Tube, Oil Gauge	1	
6	3636983	Tube, Oil Gauge	1	
7	3636984	Dipstick	1	
8	3678786	Seal, O Ring	1	
9	3637745	Sleeve, Wear	1	
10	3637746	Clamp, Tube	1	
11	3637963	Bracket, Oil Tube	1	
12	3637965	Bracket, Oil Tube	1	
13	3892411	Screw, Hexagon Head Cap	2	
14	3902662	Nut, Hexagon Flange	1	M10 X 1.50.
15	3903112	Screw, Hex Flange Head Cap	2	M10 x 1.50 x 30.
16	3903990	Screw, Hex Flange Head Cap	4	M10 X 1.50 X 20.

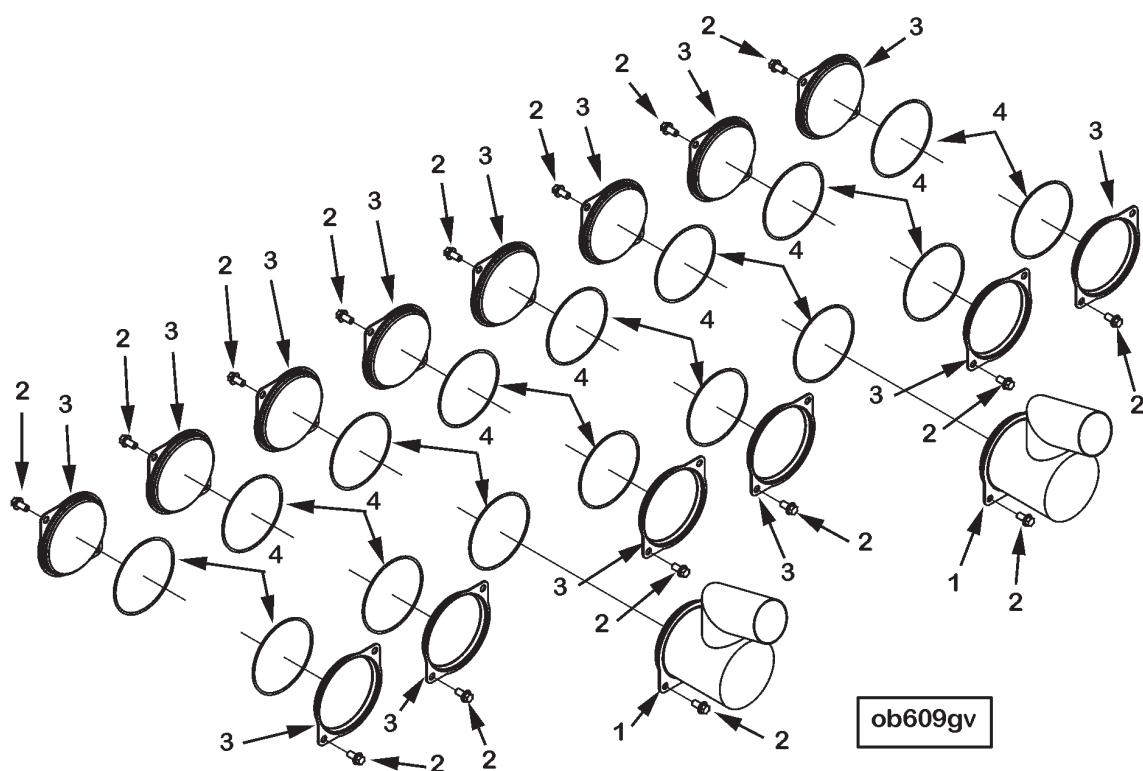


Group No. 07.06

**Lube Oil Pump**

Option No. LP6704

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>LUBE OIL PUMP OPTION LP6704</b>		
1	3089016	Screw, Hex Flange Head Cap	3	Pump, lubricating oil
2	3089234	Screw, Hex Flange Head Cap	1	To be used on quantum QSK60 engine.
3	3089886	Seal, Rectangular Ring	2	
4	3900637	Screw, Hex Flange Head Cap	6	M12 X 1.75 X 35.
5	3902460	Screw, Hex Flange Head Cap	6	M10 X 1.50 X 25.
6	4916879	Sleeve	1	
7	3914407	Screw, Hex Flange Head Cap	3	M10 X 1.50 X 100
8	3920447	Screw, Hex Flange Head Cap	2	M12 X 1.75 X 40.
9	4016660	Shim	2	
10	4016661	Shim	2	
11	3636362	Connection, Oil Transfer	1	
12	4916874	Connection, Oil Transfer	1	
13	(3642281)	Pump, Lubricating Oil	1	ref SPT06t7-13
14	4916878	Tube, Lub Oil Transfer	1	



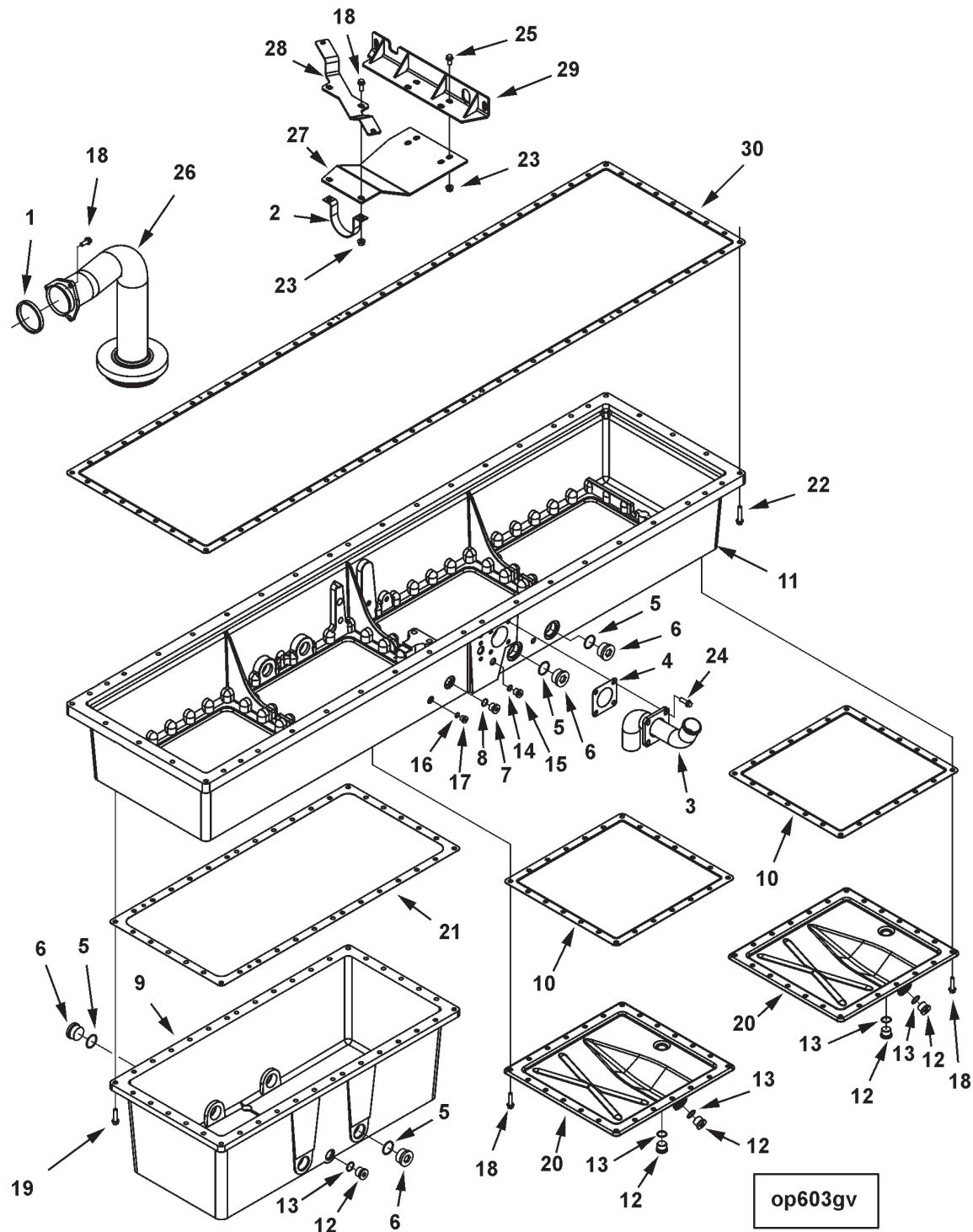
ob609gv

Group No. 07.02

**COVER,HAND HOLE**

Option No. OB67102

Ref No.	Part Number	Part Name	Req	Remarks
		<b>COVER,HAND HOLE OPTION OB67102</b>		
1	3636239	Cover, Hand Hole	2	
2	3903990	Screw, Hex Flange Head Cap	30	M10 X 1.50 X 20.
3	4086695	Cover, Hand Hole	14	
4	4100660	Seal, O Ring	16	

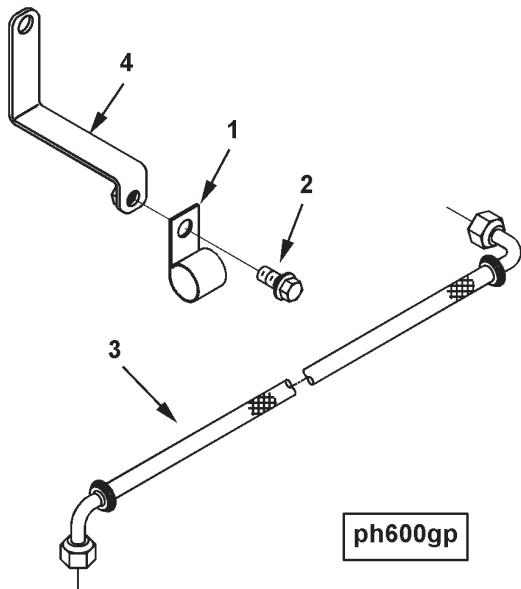


Group No. 07.01

Pan,Oil

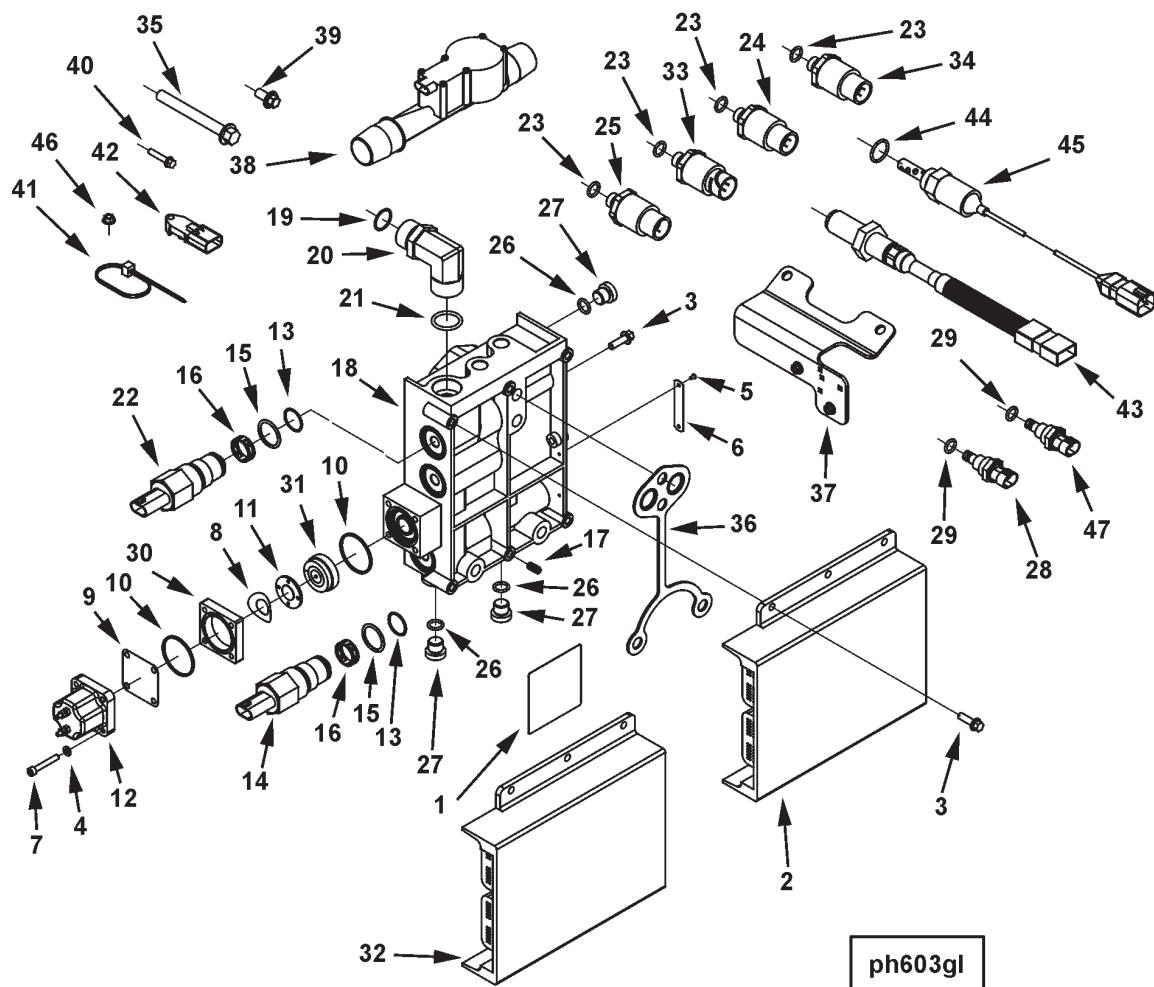
Option No. OP6089

Ref No.	Part Number	Part Name	Req	Remarks
		PAN,OIL OPTION OP6089		Sump location: #2 and #3 Cylinders. Sump profile: Double deep Material: Aluminum Construction: Cast High oil capacity (L): 261 (Gal) Low oil capacity (L): 231 (61 Gal) Angularity limits: 20 degrees Drain location: Right bank accessible ports/sizes 6 off M27x2 oil drain ports (2 in oil pan and 4 in oil pan covers) 4 off M42 x 2 ports in oil pan adapter. 1 off M22 x 1.5 ports in oil pan adapter.
1	3089891	Seal, Rectangular Ring	1	
2	3171711	Clamp, Tube	2	
3	3636232	Tube, Lub Oil Drain	1	
4	3635395 (3640545)	Gasket, Wtr Trf Connection	1	
	3089023	Adapter, Oil Pan TLA	1	
5	3089019	Plug, Threaded	8	
6	(3089021)	Seal, O Ring	1	
	3089238	Plug, Threaded	1	
7	(3089239)	Plug, Threaded	4	
8	3089240	Seal, O Ring	1	
9	3171565	Pan, Oil	1	
10	3332085	Gasket, Oil Pan Cover	2	
11	3636014	Adapter, Oil Pan	1	
	3678611	Plug, Threaded	6	
12	(3678605)	Plug, Threaded	1	
13	3678606	Seal, O Ring	1	
	3678873	Plug, Threaded	2	
14	3678786	Seal, O Ring	1	
15	(3678791)	Plug, Threaded	1	
	3678921	Plug, Threaded	6	
16	3678912	Seal, O Ring	1	
17	(3678922)	Plug, Threaded	1	
18	3902460	Screw, Hex Flange Head Cap	57	M10 x 1.50 x 25
19	3903464	Screw, Hex Flange Head Cap	35	M10 x 1.50 x 40
20	4080151	Cover, Oil Pan	2	
21	4101379	Gasket, Oil Pan	1	
22	3900634	Screw, Hex Flange Head Cap	52	M10 x 1.50 x 50
23	3902662	Nut, Hexagon Flange	8	M10 X 1.50
24	3903112	Screw, Hex Flange Head Cap	4	M10 x 1.50 x 30
25	3903990	Screw, Hex Flange Head Cap	4	M10 x 1.50 x 20
26	4015803	Tube, Lub Oil Supply	1	
27	4017188	Bracket, Oil Tube	1	
28	4065718	Bracket, Oil Tube	1	
29	4086650	Bracket, Oil Tube	1	
30	3332084	Gasket, Oil Pan Adapter	1	



Ref No.	Part Number	Part Name	Req	Remarks
1 2 3 4	107460 3903990 4065606 4065229	ENGINE CONTROL MODULE PLUM OPTION PH6722  Clip Screw, Hex Flange Head Cap Hose, Flexible Bracket, Fuel Plumbing	1 1 1 1	Plumbing, eng cnt module Engine mode: QSK60 Air Compressor: No Bracket mounts on rearmost fuel filter head lug facing forwards.  M10 X 1.50 X 20.

## NOTES

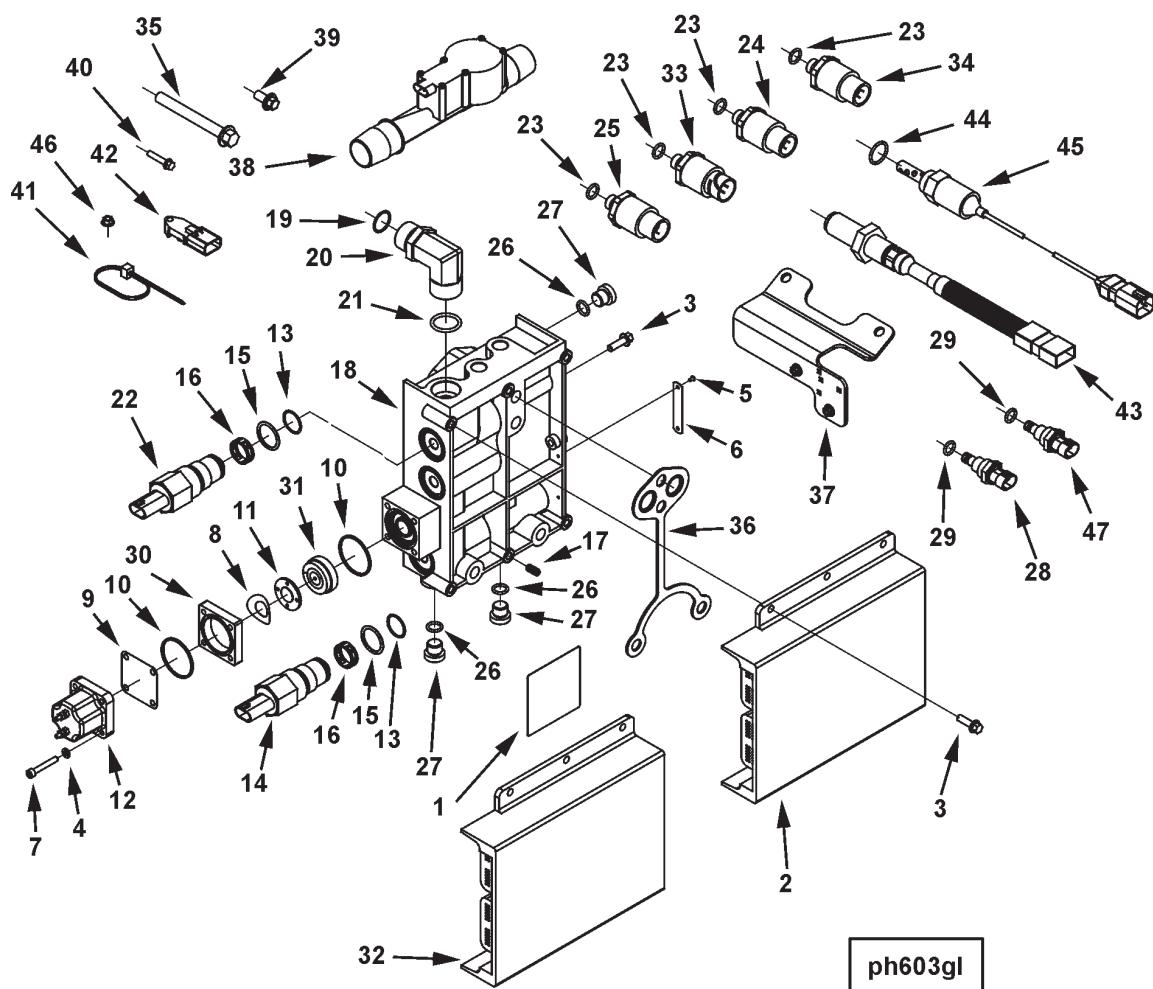


Group No. 05.06.1

**Module, Engine Control**

Option No. PH6768

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>MODULE, ENGINE CONTROL OPTION PH6768</b>		
1	3066855	Dataplate	1	
	4088181	Valve, Etr Fuel Control	1	
2	3867743	Module, Electronic Control	1	
3	3901865	Screw, Hex Flange Head Cap	6	
	4088180	Valve, Etr Cnt Pressure	1	
4	S 607	Washer, Lock	4	
5	S 2286	Screw, Drive	2	
6	105375	Nameplate	1	
7	118226	Screw, Socket Head Cap	4	
8	129768	Spring, Valve	1	
9	129839	Shield, Shutoff Valve	1	
10	129888	Seal, Rectangular Ring	2	
11	196057	Disc, Valve	1	
12	3021420	Solenoid	1	
	3330602	Actuator, Etr Fuel Control	1	
13	3042542	Seal, O Ring	1	
14	3331031	Actuator, Etr Fuel Control	1	
15	3865398	Seal, O Ring	1	
16	3867393	Screen, Filter	1	
	3330658	Body, Control Valve	1	
17	3329693	Insert, Threaded	8	
18	3330657	Body, Control Valve	1	
	3331818	Elbow, Male Union	1	
19	3085709	Seal, O Ring	1	
20	3331819	Elbow, Male Union	1	
21	3678606	Seal, O Ring	1	
	3347907	Actuator, Etr Fuel Control	2	ECVA Fuel Rail Actuator
13	3042542	Seal, O Ring	2	
22	3348442	Actuator, Etr Fuel Control	1	
15	3865398	Seal, O Ring	2	
16	3867393	Screen, Filter	2	
	3408562	Sensor, Pressure	1	Fuel Rail
23	3330202	Seal, O Ring	1	
24	3408563	Sensor, Pressure	1	
	3408564	Sensor, Pressure	1	Timing rail.
23	3330202	Seal, O Ring	1	
25	3408565	Sensor, Pressure	1	
	3678921	Plug, Threaded	4	
26	3678912	Seal, O Ring	1	
27	(3678922)	Plug, Threaded	1	
28	4954905	Sensor, Temperature	2	Coolant or oil.
29	4010519	Seal, O Ring	1	
30	4088863	Housing, Actuator	1	
31	4088274	Disc, Actuator	1	
32	4921411	Module, Electronic Control	1	
	4088734	Sensor, Pressure	2	Oil.
23	3330202	Seal, O Ring	1	
33	4088735	Sensor, Pressure	1	
	3408556	Sensor, Pressure	1	Coolant or intake m
23	3330202	Seal, O Ring	1	
34	3408557	Sensor, Pressure	1	
35	3093936	Screw, Hex Flange Head Cap	4	
36	3332183	Gasket, Connection	1	

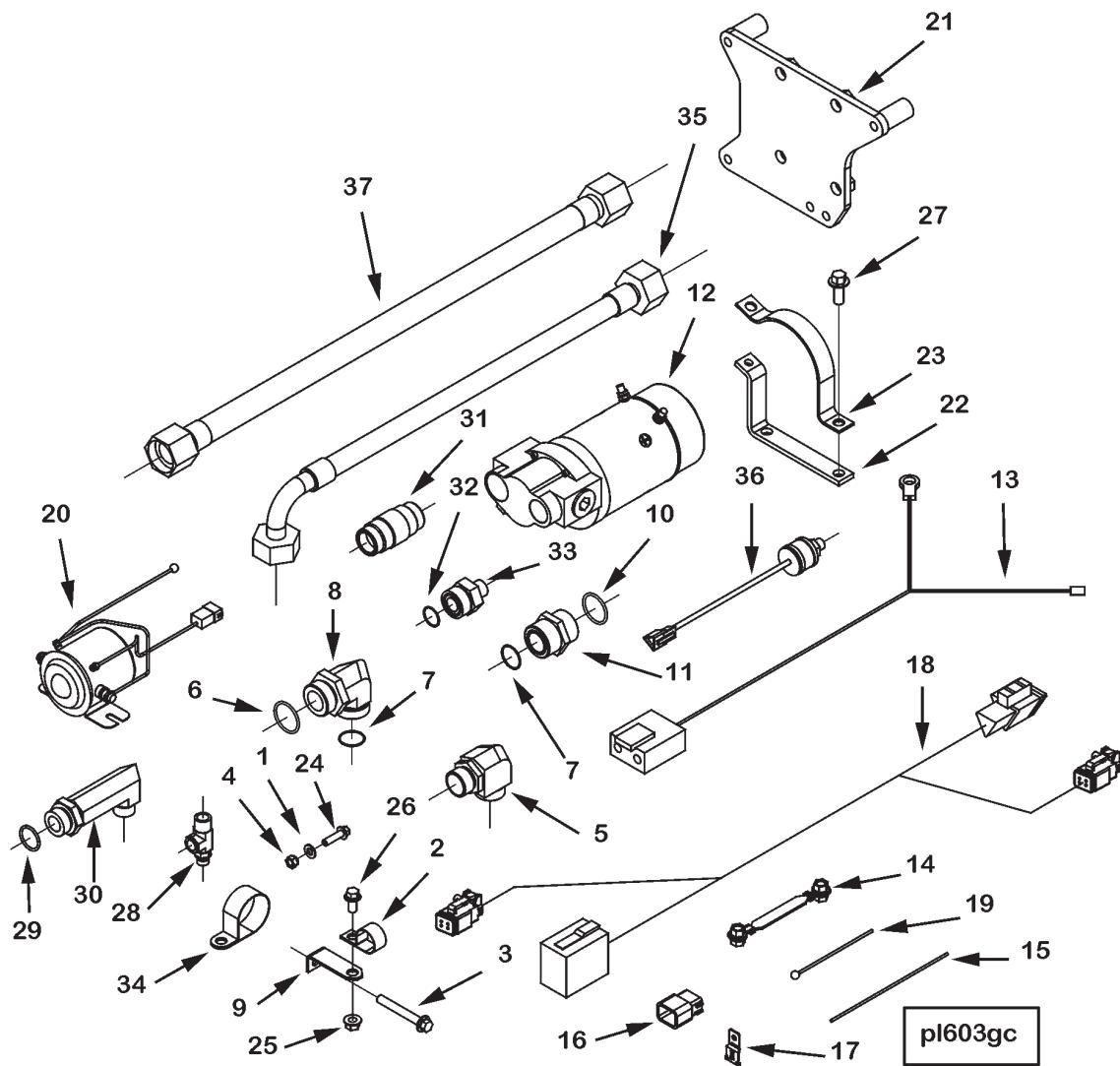


Group No. 05.06.1

Module, Engine Control

Option No. PH6768

Ref No.	Part Number	Part Name	Req	Remarks
37	3638453	Bracket, Sensor	1	
38	3867561	Sensor, Blowby Flow	1	Blowby flow.
39	3900629	Screw, Hex Flange Head Cap	2	M8 X 1.25 X 16.
40	3968475	Screw, Hex Flange Head Cap	1	
41	4001537	Clamp, Wire Tie	1	
42	4902720	Sensor, Pressure	1	Ambient air.
43	3408472	Sensor, Speed	1	Flywheel.
	3408653	Sensor, Fluid Level	1	Oil.
44	3089240	Seal, O Ring	1	
45	3408654	Sensor, Fluid Level	1	Oil.
46	3282074	Nut, Hexagon Flange	2	
	3678921	Plug, Threaded	1	
26	3678912	Seal, O Ring	1	
27	3678922	Plug, Threaded	1	
	3408345	Sensor, Temperature	1	Coolant or intake m
47	3408346	Sensor, Temperature	1	
29	4921574	Seal, O Ring	1	
	3865346	Sensor, Temperature	1	Coolant or oil.
28	3096153	Sensor, Temperature	1	Coolant or oil.
29	(4921574)	Seal, O Ring	1	

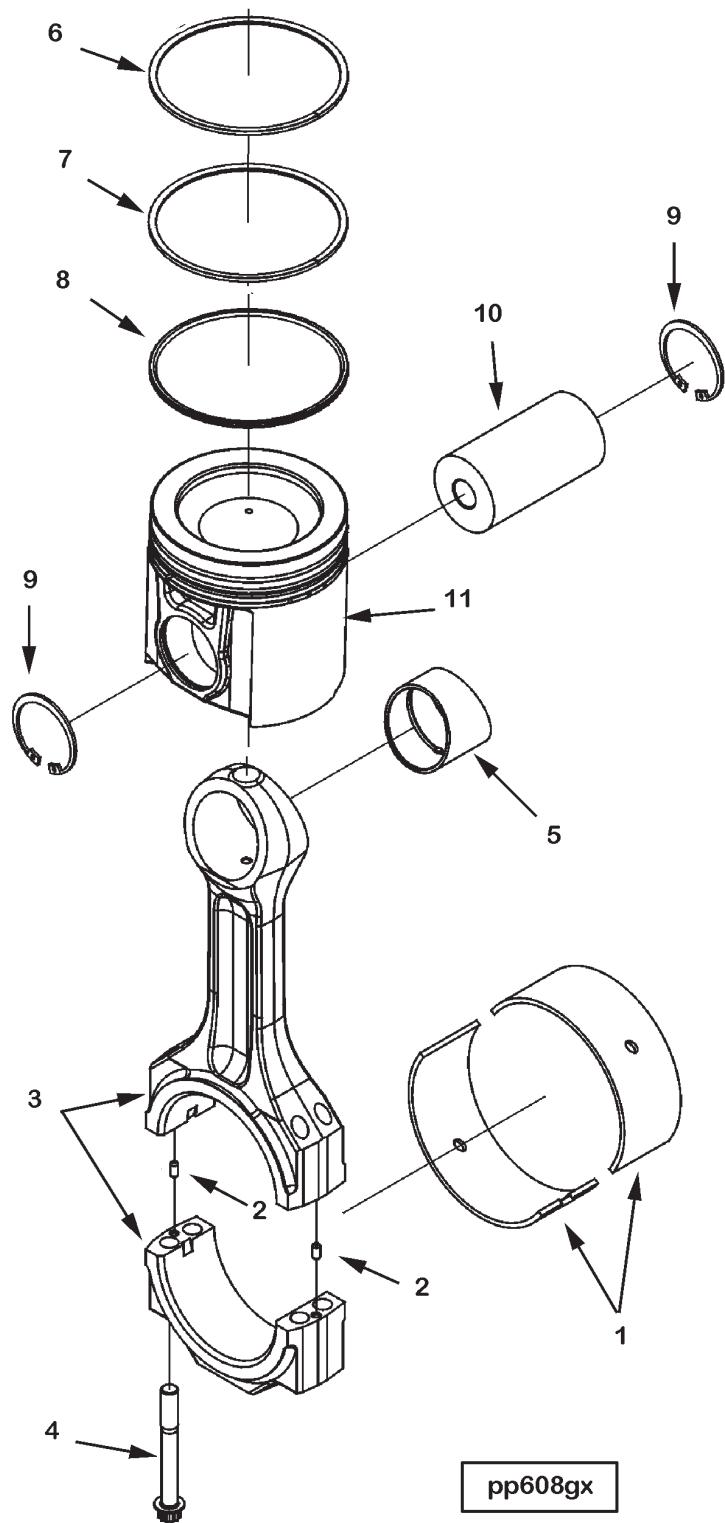


Group No. 07.06.1

## Primer, Engine Lubricating

Option No. PL6805

Ref No.	Part Number	Part Name	Req	Remarks
		<b>PRIMER, ENGINE LUBRICATING OPTION PL6805</b>		Engine lubricating primer
				Engine Family: Qsk60 manufacturer/model: RPM Industries/p4 k40
				Voltage: 24 mounting location: Right bank rear over cylinder #6 prelube attachment: Pan rail below cylinder #6 and cylinder block wire harness included: Yes plumbing supplied: Yes supply: #16 hose supply hose connection: 1 7/16-12 UNF supply interface: Lube oil filter head suction: #20 hose suction hose connection: 1 11/16-12 UNF suction interface: Oil pan adapter items kitted: Wiring harness/relay switch For use on qsk60 engines with spin-on filter heads.
1	S 626	Washer, Plain	2	5/16 Inch.
2	67950	Clip	1	# 16
3	3282081	Screw, Hex Flange Head Cap	2	M10 x 1.50 x 75.
4	3336566	Nut, Lock	2	
5	3393258	Elbow, Male Adapter	1	
	3410392	Elbow, Male Union	1	
6	3089019	Seal, O Ring	1	
7	3332160	Seal, O Ring	1	
8	3410393	Elbow, Male Union	1	
9	3628554	Brace, Tube	1	
	3634686	Union, Male	1	
10	3063166	Seal, O Ring	1	
7	3332160	Seal, O Ring	1	
11	3634688	Union, Male	1	
12	3637969	Primer, Engine Lubricating	1	
13	4007287	Harness, Wiring	1	
14	4067915	Cable, Battery	1	
15	4067917	Cable, Battery	1	
16	4951860	Switch, Relay	1	
17	4951861	Bracket, Relay	1	
18	4951862	Harness, Wiring	1	
19	4951863	Cable, Battery	1	
20	4951864	Switch, Magnetic	1	
21	3639516	Bracket, Pump	1	
22	3639540	Bracket, Pump	2	
23	3639541	Bracket, Pump	2	
24	3902114	Screw, Hex Flange Head Cap	2	M8 X 1.25 X 30.
25	3902662	Nut, Hexagon Flange	1	M10 X 1.50.
26	3903990	Screw, Hex Flange Head Cap	1	M10 X 1.50 X 20.
27	3910495	Screw, Hex Flange Head Cap	6	M12 X 1.75 X 30.
28	4017212	Tee, Male Union	1	
	4065496	Elbow, Male Union	1	
29	3678846	Seal, O Ring	1	
30	4065497	Elbow, Male Adapter	1	
	4065979	Valve, Check	1	
31	4007204	Valve, Check	1	
	4007207	Connector, Male	1	
32	3075658	Seal, O Ring	1	
33	4007208	Union, Male	1	
34	4080234	Clip	1	
35	4080576	Hose, Flexible	1	
36	4924925	Switch, Pressure	1	
37	4928120	Hose, Flexible	1	

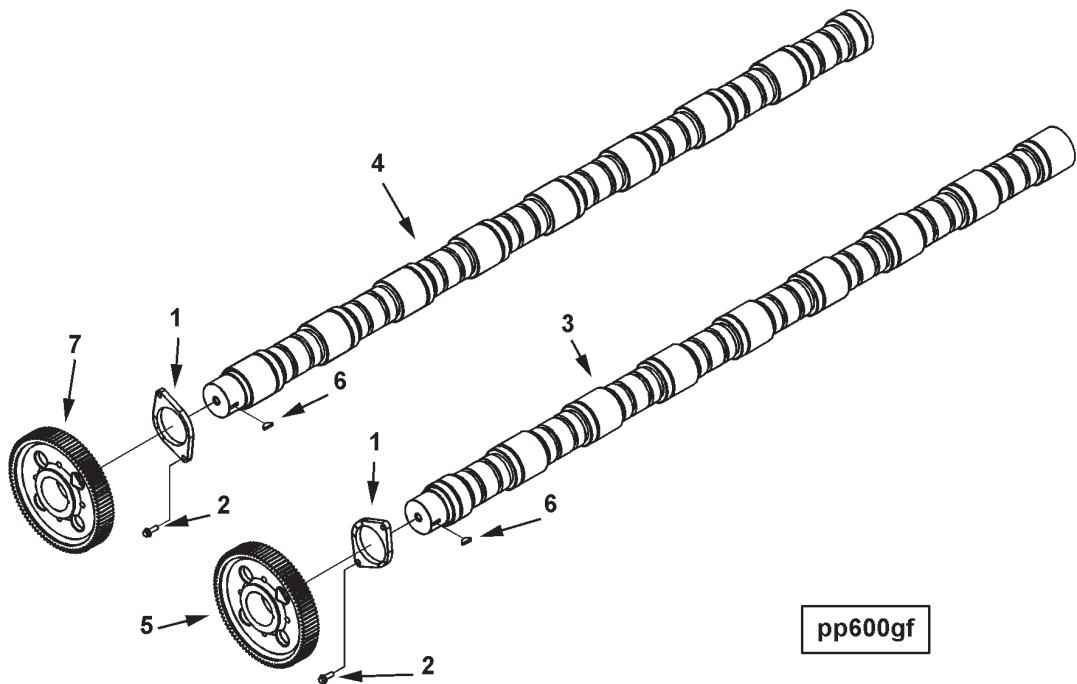


Group No. 01.04

**Connecting Rod And Piston**

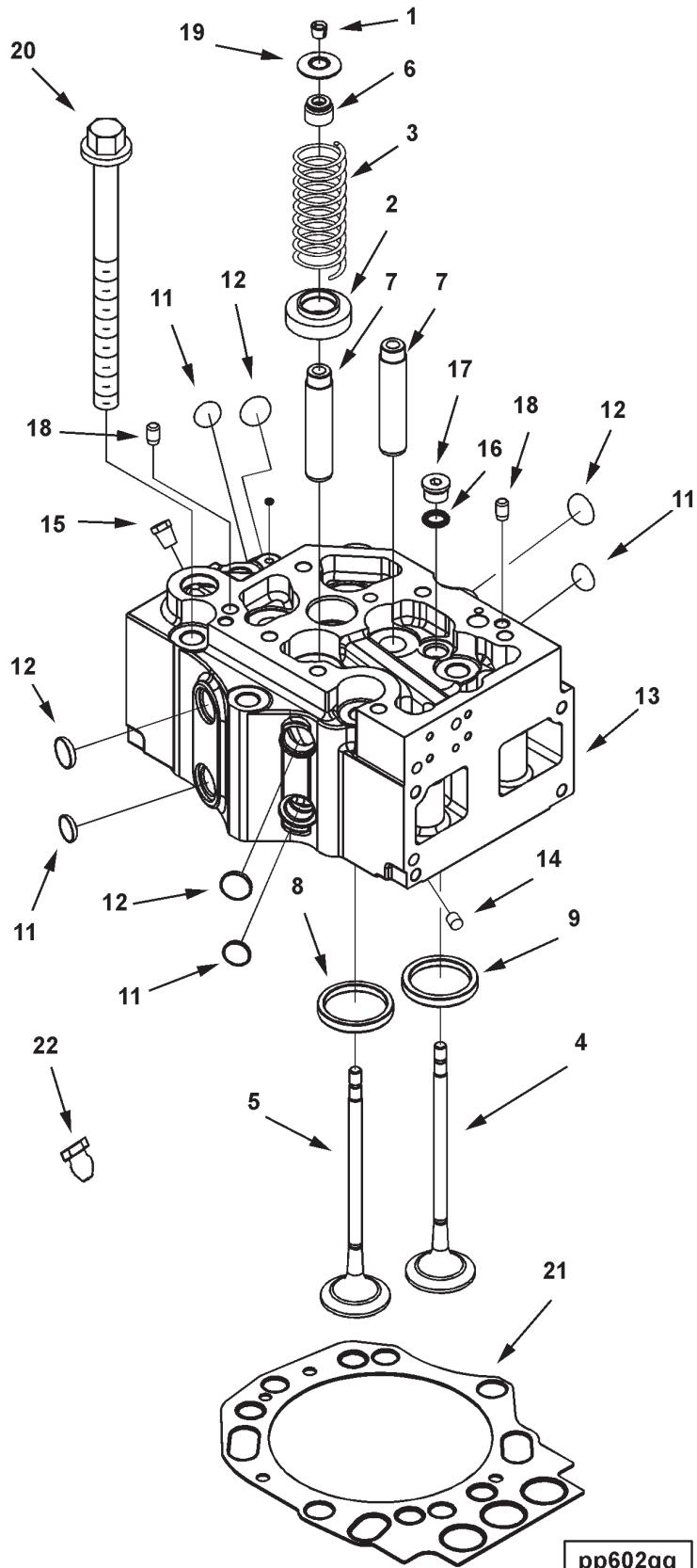
Option No. PP2848

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>CONNECTING ROD AND PISTON OPTION PP2848</b>		Performance parts  Certified Model Name: Qsk60- C timing gear code: Kf CPL: 2848 Certified By: EPA , CARB AFC: N/A ASA: N/A EFC: N/A ETC: N/A Manifold Type: Dry Engine Aspiration: Turbocharger Aftercooled Engine Control System: HPI Application: Nonroad Power Turbine: N/A Design Phase: N/A Power Rating: N/A ECM version: CM series centinel provision: No.
1	3640763 3640764 3640765 3640766 3640767 (3640518)	Bearing, Connecting Rod Bearing, Connecting Rod Bearing, Connecting Rod Bearing, Connecting Rod Bearing, Connecting Rod Rod, Engine Connecting	2 A/R A/R A/R A/R 16	.25 MM oversize .50 MM oversize .75 MM oversize 1.00 MM oversize order Recon 3640518 NX
2	69558	Dowel, Pin	2	
3	(3640515)	Rod, Engine Connecting	1	
4	4007226	Screw, Hex Flange Head Cap	4	
5	3639974	Bushing	1	
	4956091	Set, Piston Ring	16	
6	(4910251)	Ring, Compression Piston	1	Serviced as mult kits.
7	3090460	Ring, Compression Piston	1	
8	(3090450)	Ring, Oil Piston	1	Serviced as mult kits.
	4955781	Kit, Engine Piston	16	
9	3089251	Ring, Retaining	2	
10	4001416	Pin, Piston	1	
11	(3640474)	Piston, Engine	1	



Ref No.	Part Number	Part Name	Req	Remarks
		<b>CAMSHAFT OPTION PP2848</b>		
1	3082437	Bearing, Camshaft Thrust	2	
2	3903112	Screw, Hex Flange Head Cap	4	M10 x 1.50 x 30
3	(3411289)	Camshaft	1	Left Bank order 3411289 NX
4	(3411290)	Camshaft	1	Right Bank order 3411290 NX
5	3332138	Gear, Camshaft	1	
6	S 302	Key, Offset Woodruff	2	
7	3089081	Gear, Camshaft	1	

## NOTES



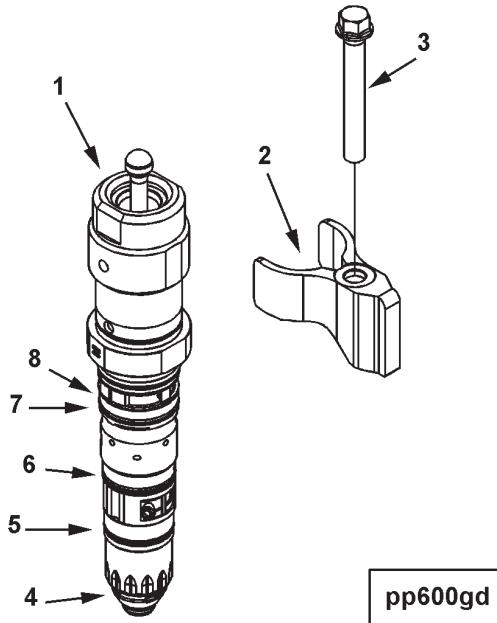
pp602gq

Group No. 02.01

**Cylinder Head**

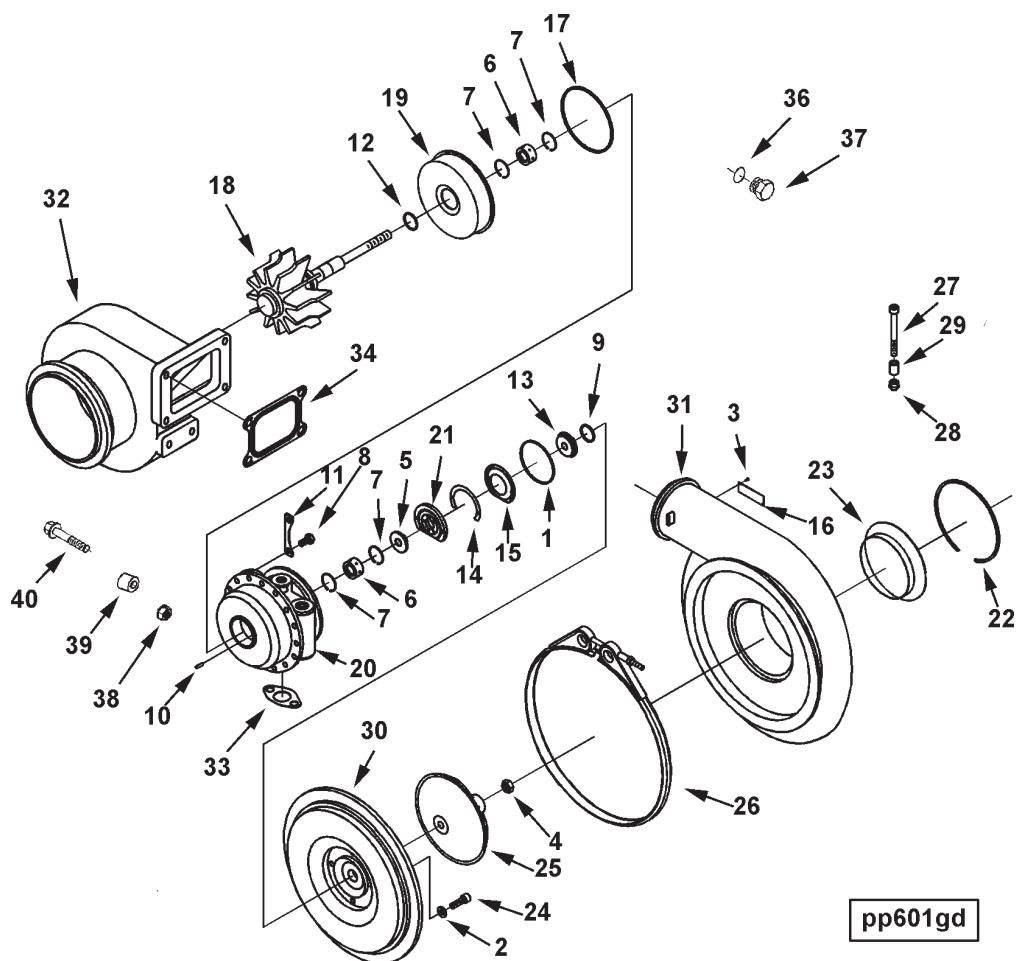
Option No. PP2848

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>CYLINDER HEAD OPTION PP2848</b>		
2	3638747	Head, Cylinder	16	
	4086649	Rotator, Valve	4	
3	3635455	Spring, Valve	4	
	4955384	Kit, Intake Valve	2	
4	3171769	Valve, Intake	1	
1	3081534	Collet, Valve	2	
	4025070	Kit, Exhaust Valve	2	
5	4065481	Valve, Exhaust	1	
1	3081534	Collet, Valve	2	
6	3408282	Seal, Valve Stem	2	
6	4080343	Seal, Valve Stem	2	
7	3641624	Guide, Valve Stem	4	
8	4080326	Insert, Valve	2	
9	4080333	Insert, Valve	2	
10	203933	Plug, Expansion	1	
11	205401	Plug, Expansion	4	
12	3007635	Plug, Expansion	4	
13	(4086626)	Head, Cylinder	1	
14	3176663	Seal, Tamper Proof	1	
15	3278093	Plug, Pipe	1	1/4 NPT.
	3678873	Plug, Threaded	1	
16	3678786	Seal, O Ring	1	
17	(3678791)	Plug, Threaded	1	
18	3900257	Dowel, Pin	2	
19	3331752	Retainer, Valve Spring	4	
22	4066599	Plug, Retainer	1	
20	4080253	Screw, Hex Flange Head Cap	112	
21	4086225	Gasket, Cylinder Head	16	
1	4955384	Kit, Intake Valve	1	
	3081534	Collet, Valve	2	
4	3171769	Valve, Intake	1	Serviced as 4955384
1	3804892	Kit, Exhaust Valve	2	
	3081534	Collet, Valve	1	
5	3090469	Valve, Exhaust	1	



Ref No.	Part Number	Part Name	Req	Remarks
		<b>INJECTOR OPTION PP2848</b>		
1	4088427	Injector	16	Recon equivalent 4088427 PX
2	3348663	Clamp, Injector	16	
3	3089499	Screw, Hex Flange Head Cap	16	
4	3867687	Seal, Injector	16	Std.
5	3867651	Seal, O Ring	16	Brown
6	3347937	Seal, O Ring	16	Green
7	4010577	Seal, O Ring	16	Blue
8	3347939	Seal, O Ring	16	Black

## NOTES

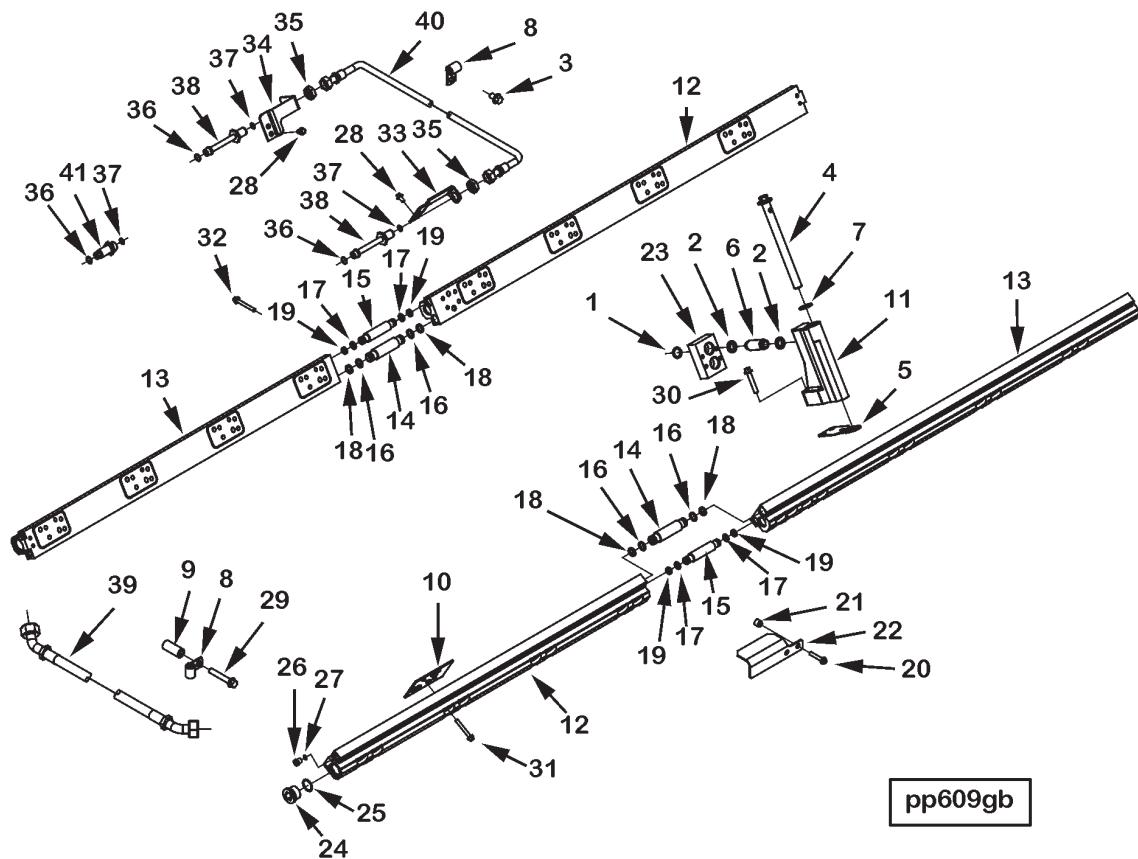


Group No. 10.06

**Turbocharger**

Option No. PP6758

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>TURBOCHARGER OPTION PP6758</b>		
1	4955686 (4047291)	Kit, Turbocharger	4	
	3502449	Turbocharger	4	
2	3504967	Seal, Rectangular Ring	1	
3	3519163	Washer, Plain	4	
4	3519535	Screw, Drive	2	
5	(4039735)	Nut, Lock	1	
6	(3598528)	Collar, Thrust	1	M11 X 1.00.
7	3519641	Bearing, Turbocharger	2	
8	3598923	Ring, Retaining	4	
9	3521442	Screw, Hexagon Head Set	8	
10	3522597	Seal, Split Ring	1	
11	3522904	Pin, Roll	2	
12	3523412	Lockplate	4	
13	(4036307)	Seal, Split Ring	1	
14	3524418	Slinger, Oil	1	
15	3524419	Shim	1	
16	(3527619)	Baffle, Oil	1	
17	3534405	Dataplate	1	
18	(3595589)	Seal, Rectangular Ring	1	
19	3536588	Shaft & Wheel	1	
20	(4038374)	Shield, Turbocharger Heat	1	
21	(4037264)	Housing, Tur Bearing	1	
22	3537301	Bearing, Tur Thrust	1	
23	3537916	Ring, Retaining	1	
24	(3590377)	Baffle, Turbocharger Noise	1	
25	(4038464)	Screw, Socket Head Cap	4	
26	3590386	Impeller, Tur Compressor	1	
27	3590435	Clamp, V Band	1	
28	3590444	Screw, Socket Head Cap	1	
29	3590445	Nut, Lock	1	
30	(4041997)	Spacer, Mounting	1	
31	(4038175)	Diffuser, Turbocharger	1	
32	(3591172)	Housing, Compressor	1	
33	3089955	Housing, Turbine	1	
34	4065615	Gasket, Connection	1	
	3678873	Gasket, Turbocharger	1	
36	3678786	Plug, Threaded	8	
37	(3678791)	Seal, O Ring	1	
38	3636059	Plug, Threaded	1	
39	3089321	Nut, Lock	16	
40	4000837	Spacer, Mounting	16	
		Screw, Hex Flange Head Cap	16	

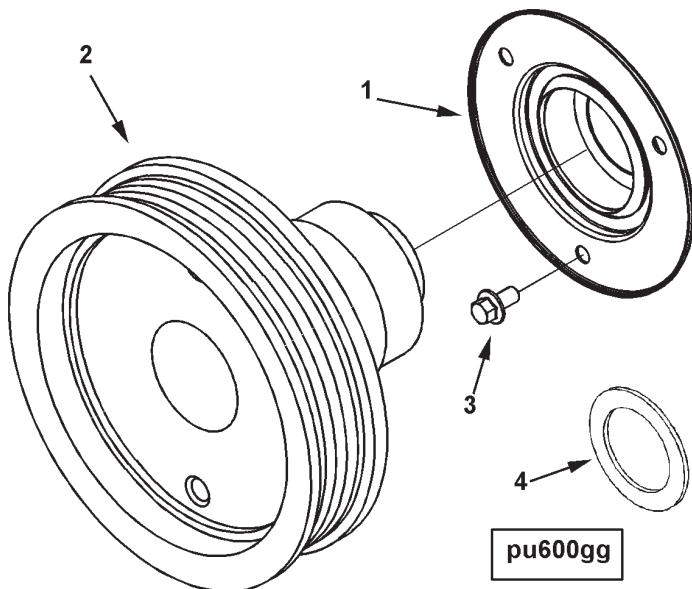


Group No. 06.01.2

**Plumbing,Injector**

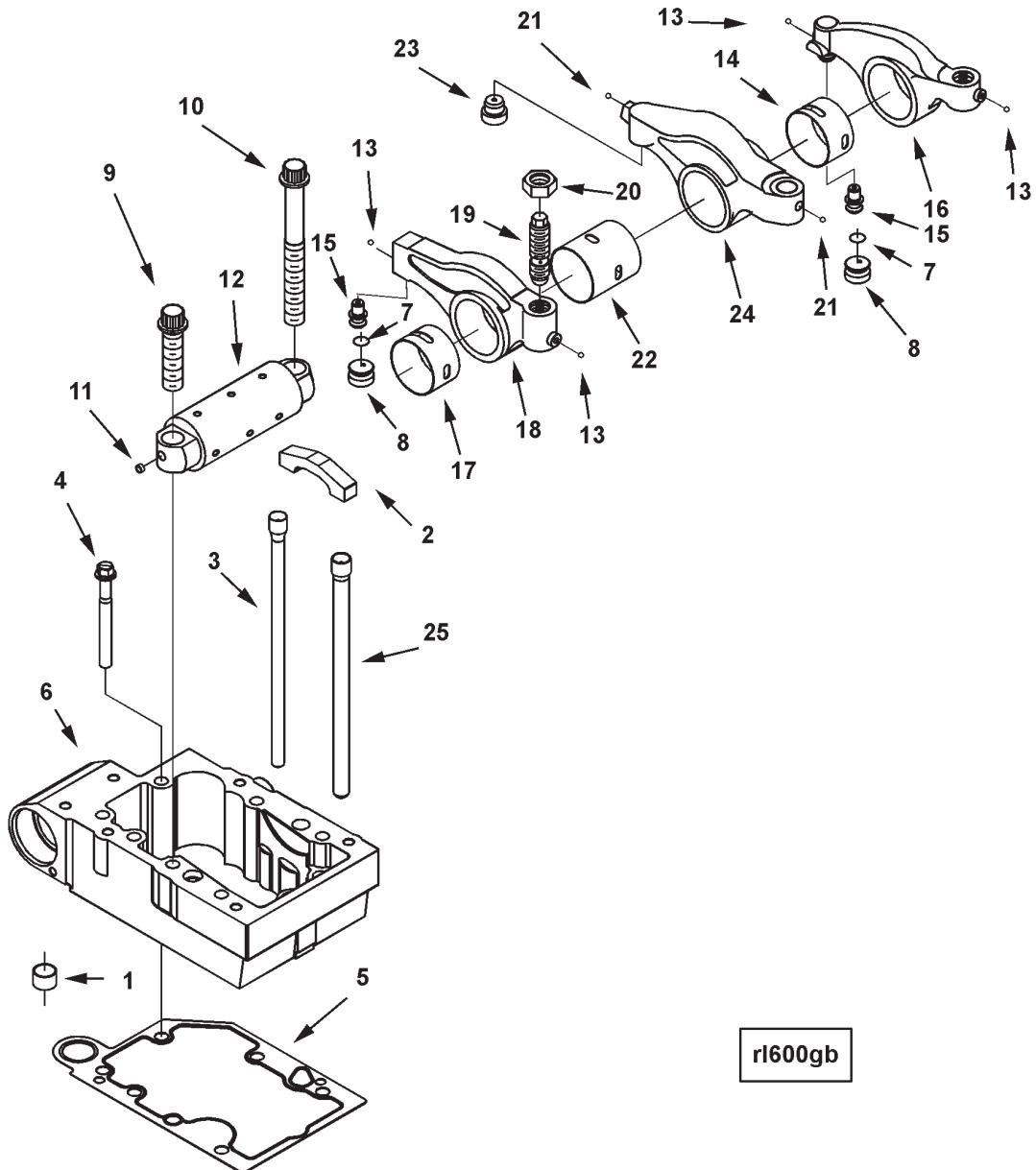
Option No. PP6940

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>PLUMBING,INJECTOR</b>		
		<b>OPTION PP6940</b>		
1	3072853	Seal, O Ring	4	
2	3089501	Seal, Rectangular Ring	8	
3	3093957	Screw, Hex Flange Head Cap	2	
4	3171693	Screw, Hex Flange Head Cap	2	
5	3171695	Gasket, Connection	2	
6	3171696	Tube, Fuel Transfer	4	
7	3171963	Washer, Sealing	2	
8	3627412	Clip	6	
9	3631817	Spacer, Mounting	2	
10	3637870	Gasket, Fuel Manifold	16	
11	3641774	Connection, Fuel Block	2	
12	3638062	Manifold, Fuel	2	
13	3638063	Manifold, Fuel	2	
14	3638064	Tube, Fuel Transfer	4	
15	3638065	Tube, Fuel Transfer	2	
16	3638101	Seal, O Ring	8	
17	3638102	Seal, O Ring	4	
18	3638326	Seal, Dust	8	
19	3638327	Seal, Dust	4	
20	3639283	Screw, Hex Flange Head Cap	4	
	3639630	Shield, Fuel Line	2	
21	3639377	Spacer, Mounting	2	
22	3639629	Shield, Fuel Line	1	
23	3642058	Connection, Fuel Block	2	
	3678611	Plug, Threaded	2	
24	(3678605)	Plug, Threaded	1	
25	3678606	Seal, O Ring	1	
	3678923	Plug, Threaded	4	M10 x 1.00 x 9.5
26	(3678924)	Plug, Threaded	1	M10 X 1 X 13.5
27	3678925	Seal, O Ring	1	
28	3900626	Screw, Hex Flange Head Cap	4	M6 X 1.00 X 12
29	3900635	Screw, Hex Flange Head Cap	2	M10 X 1.50 X 60.
30	3901445	Screw, Hex Flange Head Cap	4	M8 X 1.25 X 45
31	3901937	Screw, Hex Flange Head Cap	64	M6 X 1.00 X 45.
32	(3927220)	Screw, Hex Flange Head Cap	4	
33	4000843	Brace, Tube	1	
34	4000844	Brace, Tube	1	
35	4000847	Nut, Lock	2	
	4001633	Connector, Male	2	
36	3678912	Seal, O Ring	1	
37	3922794	Seal, O Ring	1	
38	(4001170)	Connector, Male	1	No service kit.
39	4065385	Hose, Flexible	1	
40	4085920	Hose, Flexible	1	
	4101023	Connector, Male	2	
36	3678912	Seal, O Ring	1	
37	3922794	Seal, O Ring	1	
41	(4101022)	Connector, Male	1	



Ref No.	Part Number	Part Name	Req	Remarks
1 2 3 4	4080404 4080396 3900626 4080395	ACCESSORY DRIVE PULLEY OPTION PU6704  Seal, Oil Pulley, Accessory Drive Screw, Hex Flange Head Cap Spacer, Mounting	1 1 3 1	Accessory drive pulley no. of grooves: 10 groove description: Pk section v- ribbed direction of rotation:  Same as crankshaft ie: Clockwise when viewed from front of engine Drive Ratio To Engine Speed: 3.56:1 For alternator drive pulley diameter: 173mm Pitch Diameter: 170.00mm.  M6 X 1.00 X 12.

## NOTES

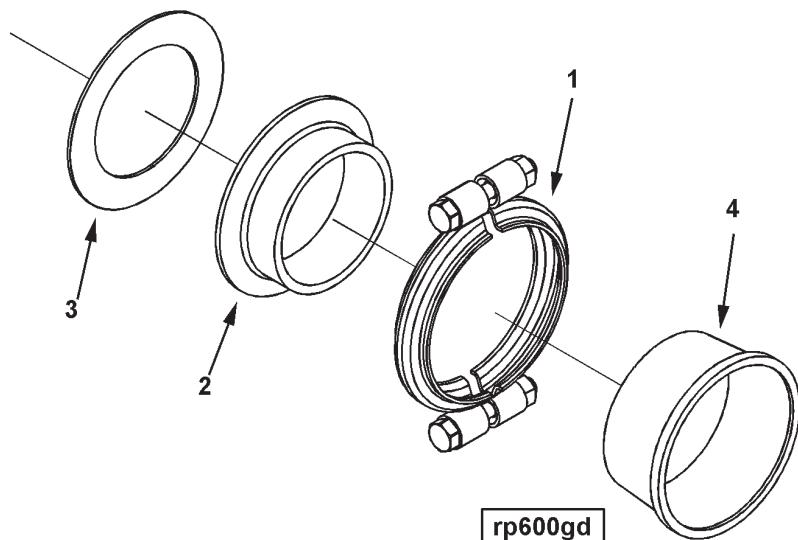


Group No. 03.01

**Lever,Rocker**

Option No. RL6712

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>LEVER,ROCKER</b>		
		<b>OPTION RL6712</b>		
1	3079743	Dowel, Ring	16	
2	3641535	Crosshead, Valve	32	
3	4080240	Rod, Push	32	
4	3089563	Screw, Hex Flange Head Cap	112	
5	3171499	Gasket, Rkr Lever Housing	16	
6	4100827	Housing, Rocker Lever	16	
9	3089193	Screw, Twelve Point Cap	16	
10	3089194	Screw, Twelve Point Cap	16	
	3089715	Shaft, Rocker Lever	16	
11	203933	Plug, Expansion	16	
12	(3089716)	Shaft, Rocker Lever	16	
	4065633	Lever, Rocker	16	
7	3028349	Seal, O Ring	16	
8	3085980	Socket, Rocker Lever	16	
13	4065627	Plug, Drive	32	
14	3085972	Bushing	16	
15	3085978	Ball, Rocker Lever	16	
16	4065632	Lever, Rocker	16	
19	3090007	Screw, Rkr Lever Adjusting	16	
20	3680057	Nut, Regular Hexagon Jam	16	
	4065636	Lever, Rocker	16	
7	3028349	Seal, O Ring	16	
8	3085980	Socket, Rocker Lever	16	
13	4065627	Plug, Drive	32	
17	3085973	Bushing	16	
15	3085978	Ball, Rocker Lever	16	
18	4065635	Lever, Rocker	16	
19	3090007	Screw, Rkr Lever Adjusting	16	
20	3680057	Nut, Regular Hexagon Jam	16	
	4065639	Lever, Rocker	16	
21	4065627	Plug, Drive	32	
22	3081514	Bushing	16	
23	3089177	Socket, Rocker Lever	16	
24	4065638	Lever, Rocker	16	
19	3090007	Screw, Rkr Lever Adjusting	16	
20	3680057	Nut, Regular Hexagon Jam	16	
25	3410897	Rod, Push	16	



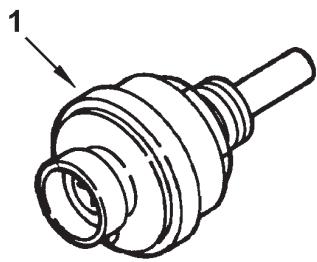
Ref No.	Part Number	Part Name	Req	Remarks
		<b>RADIATOR PLUMBING OPTION RP6002</b>		
1	3332164	Clamp, V Band	1	
2	3332194	Flange	1	
3	3332391	Gasket, Water Pump	1	
4	4017656	Plug, Orifice	1	Radiator plumbing flange for customer to weld 3 inch outside diameter tube at the auxiliary cooling water pump.

Group No. 99.01

**SOFTWARE,CALIBRATION**

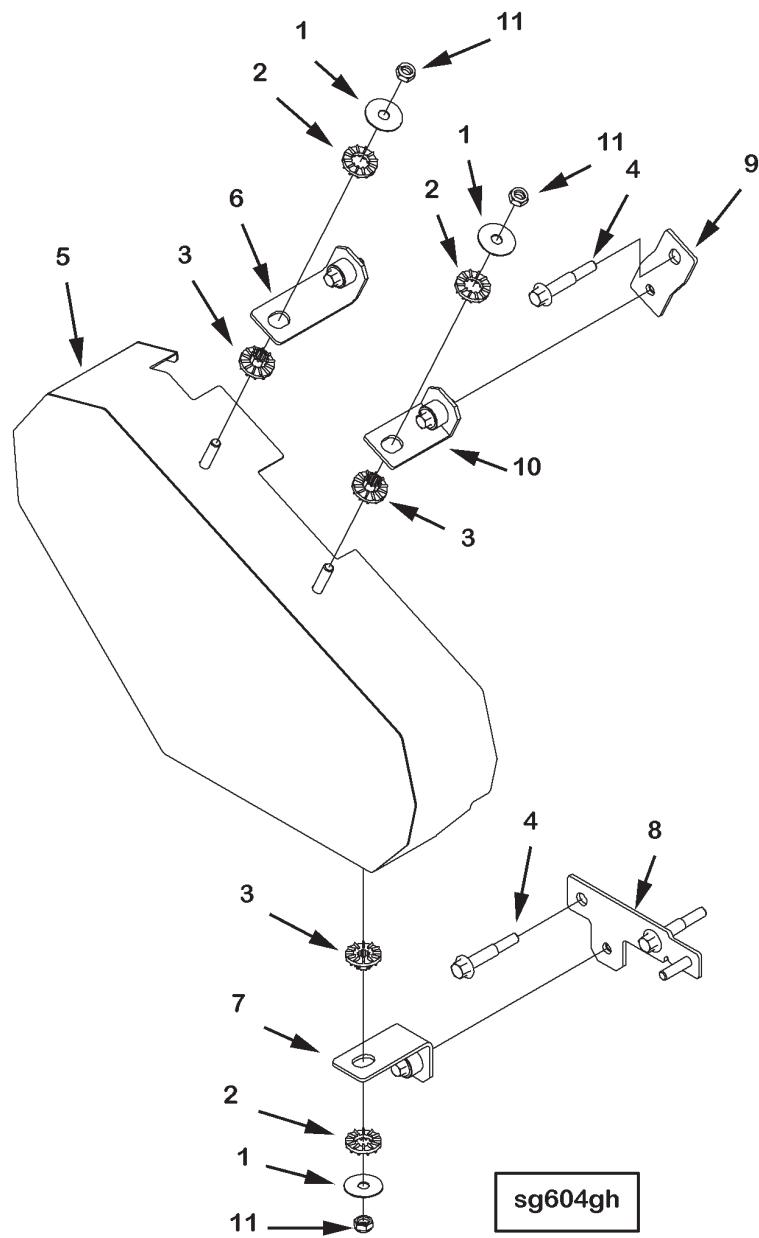
Option No. SC60486

Ref No.	Part Number	Part Name	Req	Remarks
		<b>SOFTWARE,CALIBRATION OPTION SC60486</b>		Calibration software CPL: 2848 Engine Control System: HPI rated power: 2500 BHP at 1900 RPM Peak torque: 7257 FT LB at 1500 RPM Governed Power: 2500 BHP At 1900 RPM Governed Torque: 0000 Certified By: EPA ,CARB Application: Nonroad cal restr: None Power Rating: N/A Calibration Voltage: 24 speed input: Flywheel comment: Cert level: Tier 2,tier 2 software phase: 5.9.7.8 special allowance: Tpem do option: Do 6631 sentinel: No.

**sd100gk**

Ref No.	Part Number	Part Name	Req	Remarks
1	4903489	<b>COOLANT LEVEL SENSOR OPTION SD6004</b>  Switch, Coolant Level	1	Sensor, coolant level  For use with customer supplied Wiring harness.

## NOTES

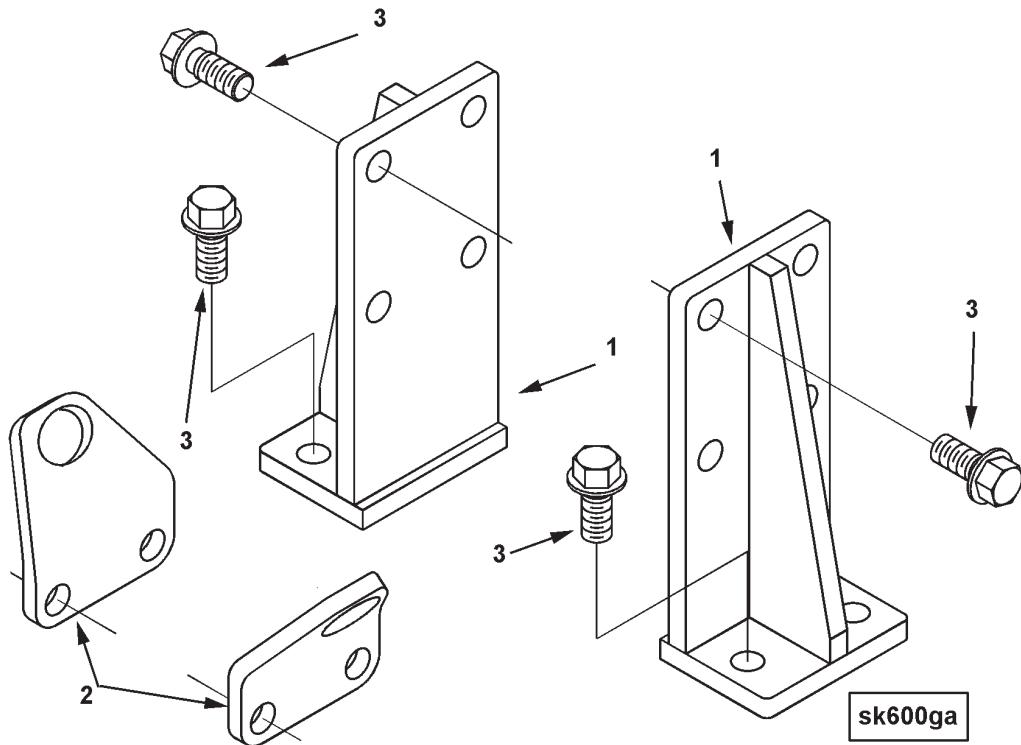


Group No. 13.02.3

**Guard,Alternator**

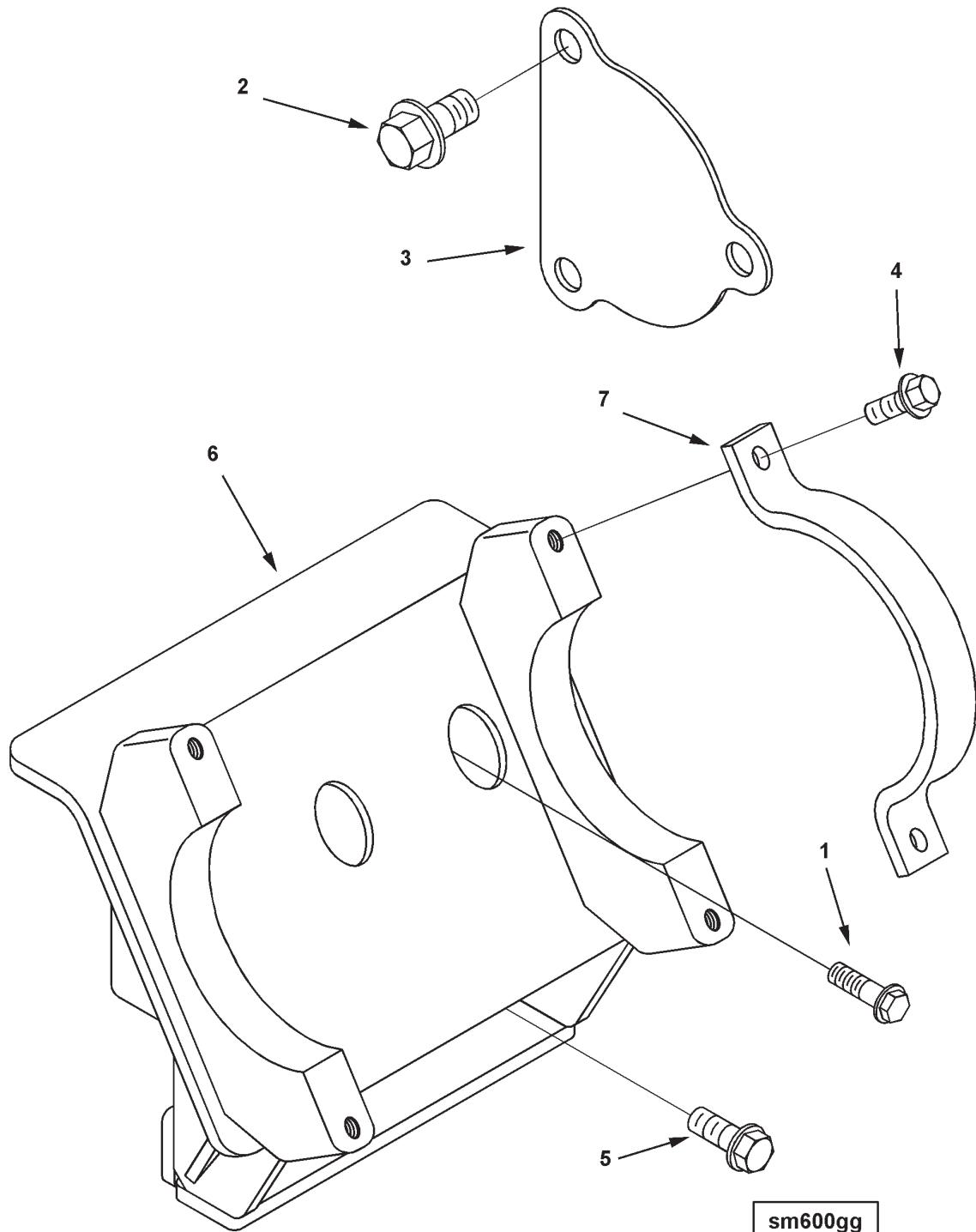
Option No. SG6095

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>GUARD,ALTERNATOR OPTION SG6095</b>		Alternator guard alternator manufacturing/ model:  Prestolite bld 3314 HC (140amp 24volt) alt drive ratio: 3.56:1 wrt engine speed right side(alternator) guard supplied: Mounted alternator terminal access: No damper guard compatible: Yes fan drive belt tensioner clearance: Yes alternator guard compliance: Eu directive 2006/42/EC for protective guards. 3/8 Inch.
1	3033800	Washer, Plain	4	
2	3035083	Isolator, Vibration	4	
3	3035084	Isolator, Vibration	4	
4	3278480	Screw, Hex Flange Head Cap	2	M12 X 1.75 X 70.
5	3643025	Guard, Alternator	1	
6	3643029	Bracket, Belt Guard	2	
7	3643033	Bracket, Belt Guard	1	
8	3643035	Bracket, Belt Guard	1	
9	3643037	Bracket, Belt Guard	1	
10	3643513	Bracket, Belt Guard	1	
11	4001248	Nut, Lock	4	



Ref No.	Part Number	Part Name	Req	Remarks
		<b>BRACKET, SHIPPING OPTION SK6703</b>		
1	4080265	Bracket, Shipping	2	Shipping bracket
2	4080327	Bracket, Shipping	2	Rear shipping brackets with added strength-
3	3089365	Screw, Hex Flange Head Cap	12	ening rib. For QSK60 and QSK78 engines

## NOTES

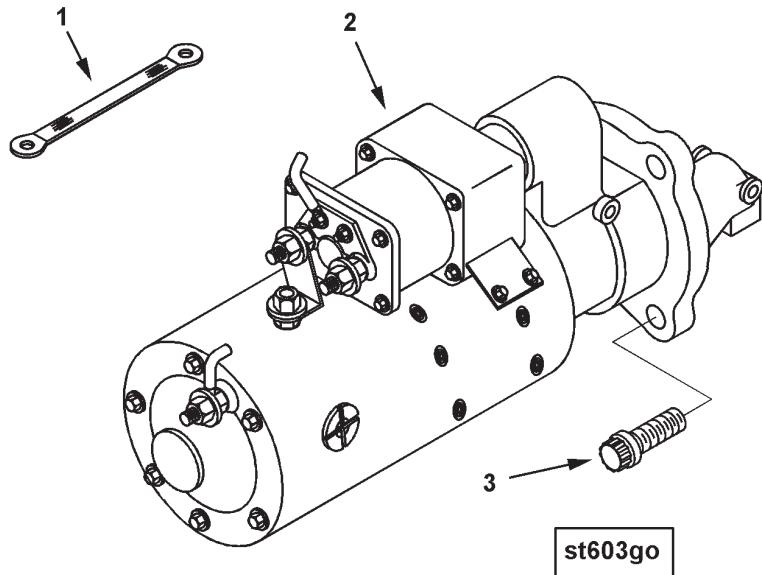


Group No. 13.05.1

**Starting Motor Mounting**

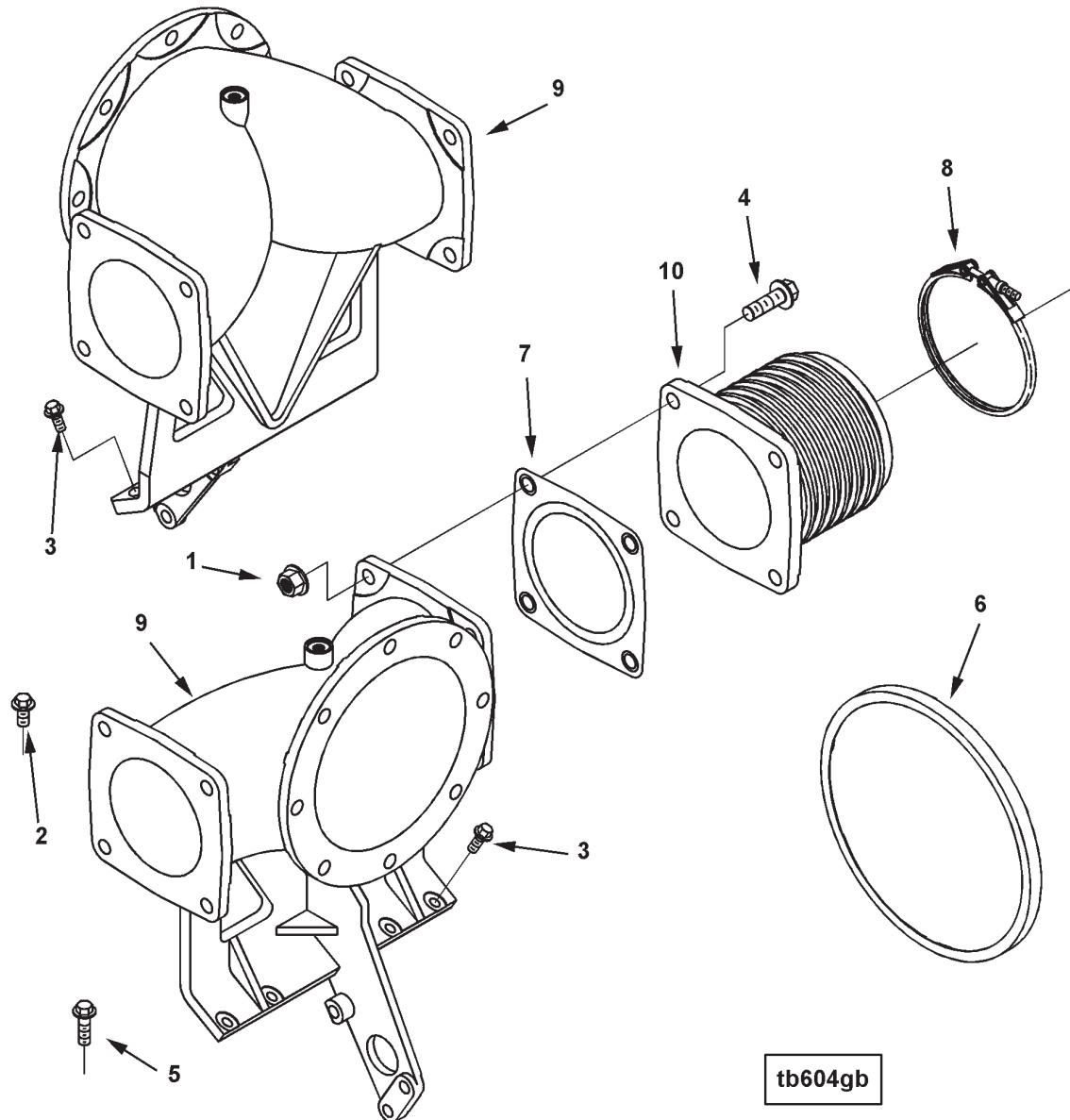
Option No. SM6708

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>STARTING MOTOR MOUNTING OPTION SM6708</b>		Mounting, starting motor Starting Motor Count: 3 starter location: 2 electric starters Mounted on the left bank of the flywheel housing and right bank pan rail mounting For remote high volume prelub (hvp) pump Flywheel Housing Material: Cast Iron Clutch Type Provision: Dry Power Supply: Electric.
1	3914407	Screw, Hex Flange Head Cap	2	M10 X 1.50 X 100
2	3089324	Screw, Hex Flange Head Cap	3	
3	3628411	Cover, Starter Flange	1	
4	3902460	Screw, Hex Flange Head Cap	4	M10 X 1.50 X 25.
5	3278480	Screw, Hex Flange Head Cap	2	M12 X 1.75 X 70.
6	4086504	Support, Lub Oil Pump	1	
7	4066180	Bracket, Pump	2	



Ref No.	Part Number	Part Name	Req	Remarks
		<b>MOTOR,STARTING OPTION ST6182</b>		Starting motor type: Oil priming device Voltage: 24 starter supplier: Cummins manufacturer/model: RPM Industries p4 k 40 pump count: 1 mounting location: Right bank type: Starting motor Voltage: 24 manufacturer: Manufactured by Remy inc branded for Cummins. Model: 50 MT400 starter count: 2 Method Of Engagement: Positive Solenoid Location: 322 Degrees gear pitch: 6/8 KW rating: 8.95 SAE type starter mounting flange: Type no. 3 mounting location: Left bank Unique Characteristics: For Use With Right bank mounted prelub nose housing of the starter motor has been modified.
1	3018924	Wire, Ground	2	
2	3636819	Motor, Starting	2	
3	3600596	Screw, Twelve Point Cap	6	M16 X 2.00 X 45.

## NOTES

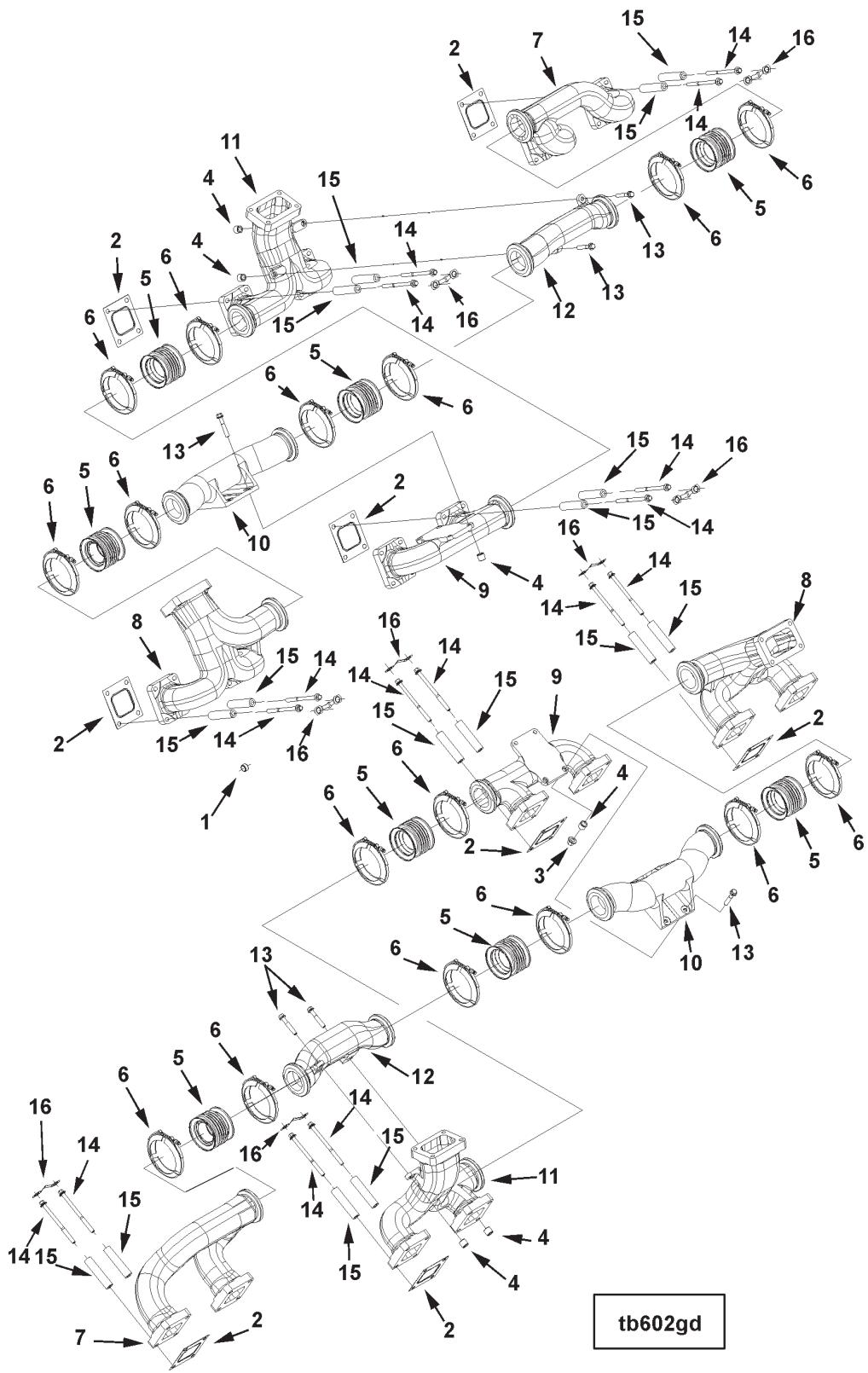


Group No. 10.06.1

**Turbocharger Arrangement**

Option No. TB6021

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>TURBOCHARGER ARRANGEMENT OPTION TB6021</b>		Turbocharger arrangement direction of exhaust: Side out  Water Cooled Bearing Housing: Construction engines only Aspiration: Turbocharger, Aftercooled, Single stage Unique Characteristics: To be used on qsk60 single stage engines only.
1	3171181	Nut, Hexagon Flange	16	
2	3901249	Screw, Hex Flange Head Cap	4	M12 X 1.75 X 25.
3	3902460	Screw, Hex Flange Head Cap	8	M10 X 1.50 X 25.
4	3916071	Screw, Hex Flange Head Cap	16	M16 X 2.00 X 50.
5	3920447	Screw, Hex Flange Head Cap	2	M12 X 1.75 X 40.
6	4065343	Cover, Protective	2	
7	4065349	Gasket, Exh Out Connection	4	
8	4065488	Clamp, V Band	4	
9	4066008	Connection, Exhaust Outlet	2	
10	4080158	Bellows	4	

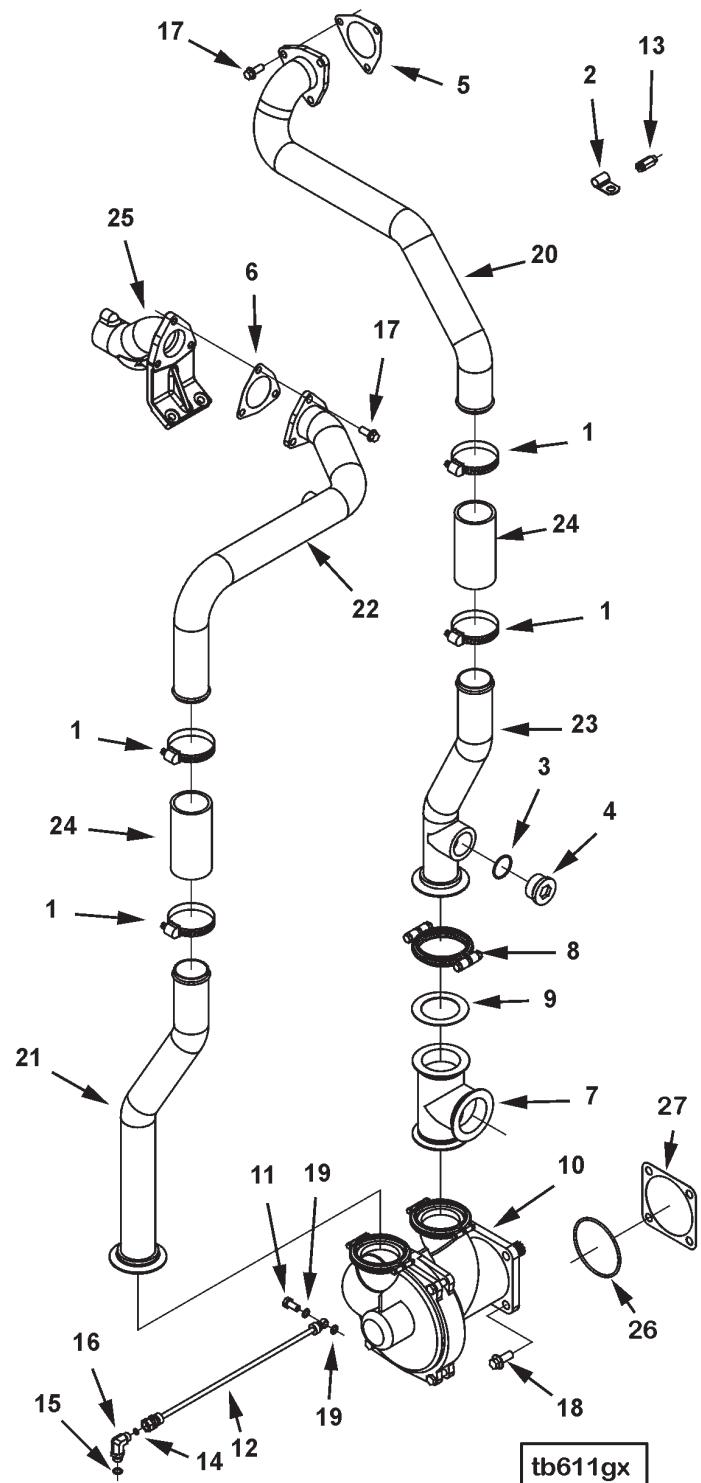


Group No. 10.06.1

**Exhaust Manifold**

Option No. TB6732

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>EXHAUST MANIFOLD OPTION TB6732</b>		
1	205129	Dowel, Ring	8	Manifold, exhaust
2	3082315	Gasket, Exhaust Manifold	16	To be used on qsk60 industrial engines only.
3	3089191	Nut, Hexagon Flange	12	
4	3089321	Spacer, Mounting	12	
5	4080141	Bellows	8	
6	3089765	Clamp, V Band	16	
7	3642649	Manifold, Exhaust	2	
8	3642647	Manifold, Exhaust	2	
9	3642654	Manifold, Exhaust	2	
10	4065896	Manifold, Exhaust	2	
11	3642648	Manifold, Exhaust	2	
12	4065900	Manifold, Exhaust	2	
13	3089959	Screw, Hex Flange Head Cap	12	
14	4065866	Screw, Hex Flange Head Cap	64	
15	3046287	Spacer, Mounting	64	
16	4101401	Lockplate	32	

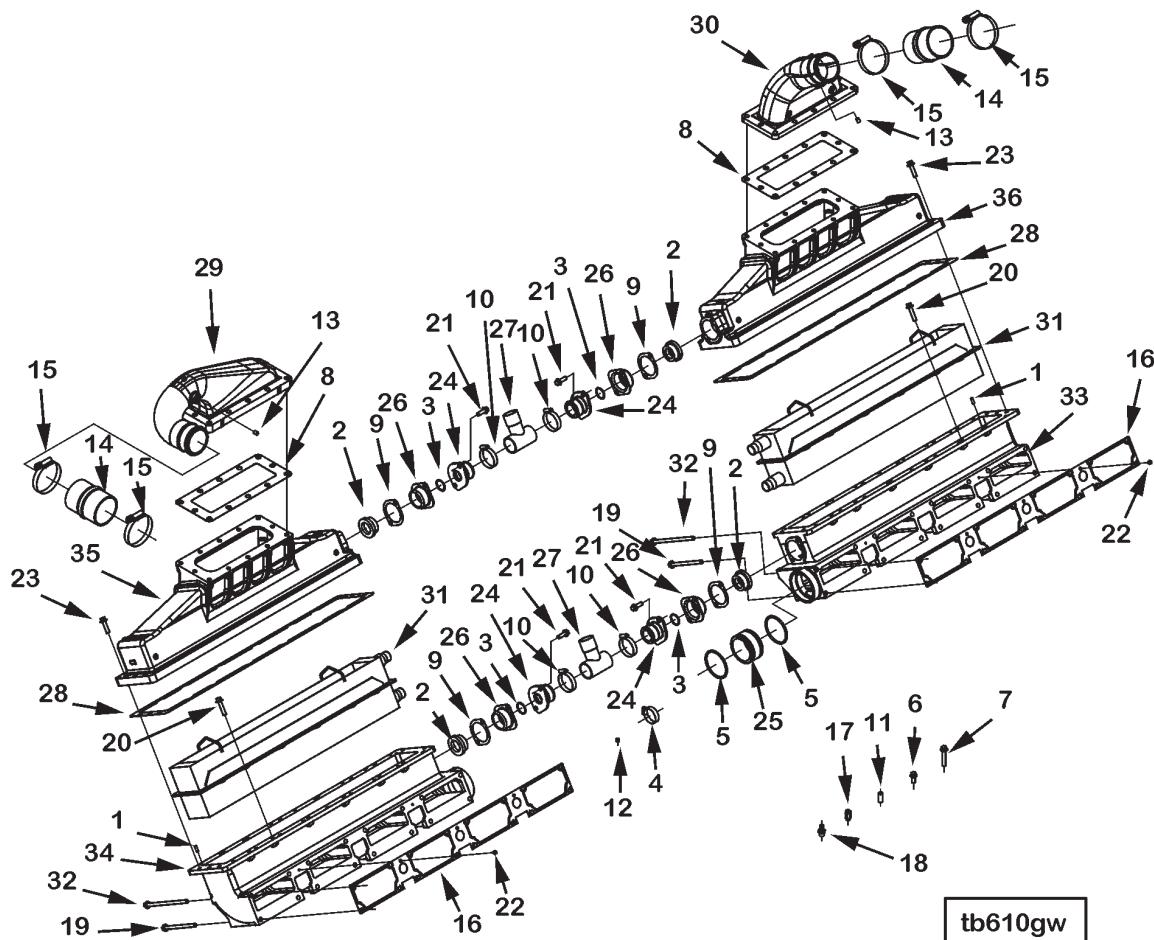


Group No. 10.06.1

**System,Auxiliary Cooling**

Option No. TB6767

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>SYSTEM,AUXILIARY COOLING OPTION TB6767</b>		
1	43828 D	Clamp, Hose	4	Auxiliary cooling system second pump for 2 pump/2 loop LTA system on qsk60 engines.
2	68152 B	Clip	2	Includes mounting hardware and plumbing. 2 1/16 - 3 Inch.
3	3089023	Plug, Threaded	1	
3	3089019	Seal, O Ring	1	
4	3089021	Plug, Threaded	1	
5	3089247	Gasket, Connection	1	
6	3332143	Gasket, Connection	1	
7	3332158	Connection, Water Inlet	1	
8	3332164	Clamp, V Band	1	
9	3332391	Gasket, Water Pump	1	
10	(3638083)	Pump, Water	1	
11	3638094	Screw, Banjo Connector	1	
12	3638095	Hose, Flexible	1	
13	3638583	Draincock	1	
	3682701	Elbow, Male Union	1	
14	3089392	Seal, O Ring	1	
15	3678912	Seal, O Ring	1	
16	3682727	Elbow, Male Union	1	
17	3902460	Screw, Hex Flange Head Cap	8	M10 X 1.50 X 25.
18	3910495	Screw, Hex Flange Head Cap	4	M12 X 1.75 X 30.
19	3963982	Washer, Sealing	2	
20	4000866	Tube, Water Bypass	1	
21	4000872	Tube, Water Inlet	1	
22	4001432	Tube, Water Inlet	1	
23	4016407	Tube, Water Transfer	1	
24	4080544	Hose, Plain	2	
25	4100829	Connection, Water Transfer	1	
26	3033248	Seal, O Ring	1	
27	3082132	Gasket, Cover Plate	1	
	4085922	Pump, Service Kit	A/R	Bearings and Seals

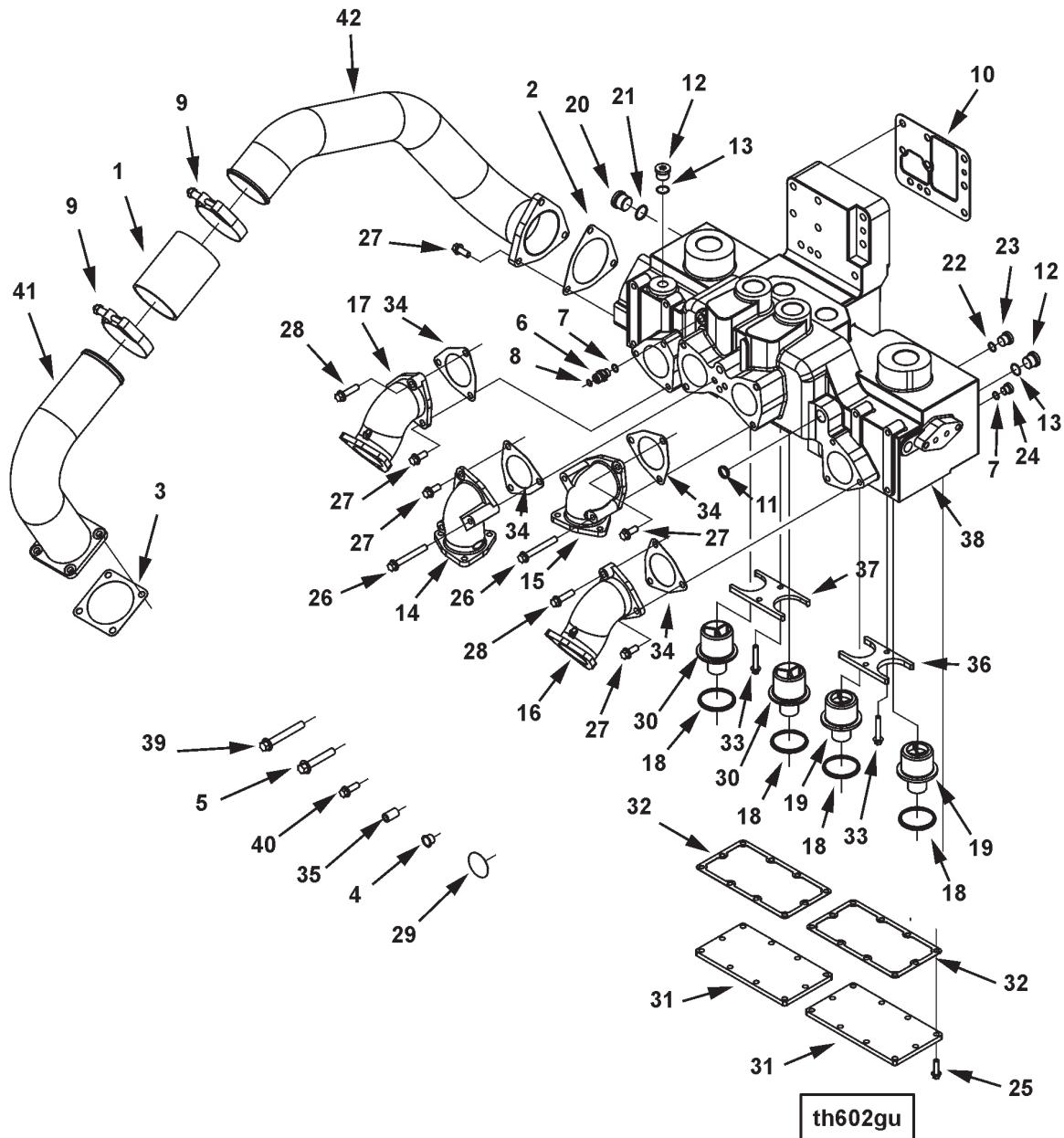


Group No. 10.01

**Aftercooler**

Option No. TB6888

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>AFTERTCOOLER OPTION TB6888</b>		
1	131584	Pin, Roll	16	
2	206808	Seal, Grommet	8	
3	3035026	Seal, O Ring	8	
4	3043487	Clamp, Hose	4	
5	3082358	Seal, O Ring	4	
6	3093932	Screw, Hex Flange Head Cap	48	
7	3102651	Screw, Hex Flange Head Cap	8	
8	3171170	Gasket, Connection	4	
9	3171287	Gasket, Connection	8	
10	3254315	Clamp, Hose	8	
11	3331834	Seal, Rectangular Ring	32	
12	3628604	Plug, Pipe	5	
13	3628605	Plug, Pipe	2	
14	3641726	Hose, Hump	4	
15	4008037	Clamp, T Bolt	8	3.69-3.94 Inch
16	3637776	Gasket, Intake Manifold	4	
17	3638582	Draincock	1	
18	3638769	Nipple, Coupling	2	
19	3681390	Screw, Hex Flange Head Cap	32	
20	3900634	Screw, Hex Flange Head Cap	48	M10 X 1.50 X 50.
21	3903112	Screw, Hex Flange Head Cap	16	M10 x 1.50 x 30.
22	3921851	Screw, Hex Flange Head Cap	12	M05 x 0.80 x 8.
23	3925437	Screw, Hex Flange Head Cap	140	M10 x 1.50 x 40.
24	4017163	Flange, Connection	8	
25	4017508	Tube, Air Balance	2	
26	4066129	Retainer, Seal	8	
27	4066276	Connection, Water Transfer	4	
28	4080573	Gasket, Aftercooler Cover	4	
29	4999056	Connection, Air Crossover	2	
30	4927995	Connection, Air Crossover	2	
31	3641078	Core, Aftercooler	4	
32	4924790	Screw, Hex Flange Head Cap	32	
33	4999047	Manifold, Air Intake	2	
34	4999050	Manifold, Air Intake	2	
35	4999052	Cover, Aftercooler	2	
36	4999239	Cover, Aftercooler	2	

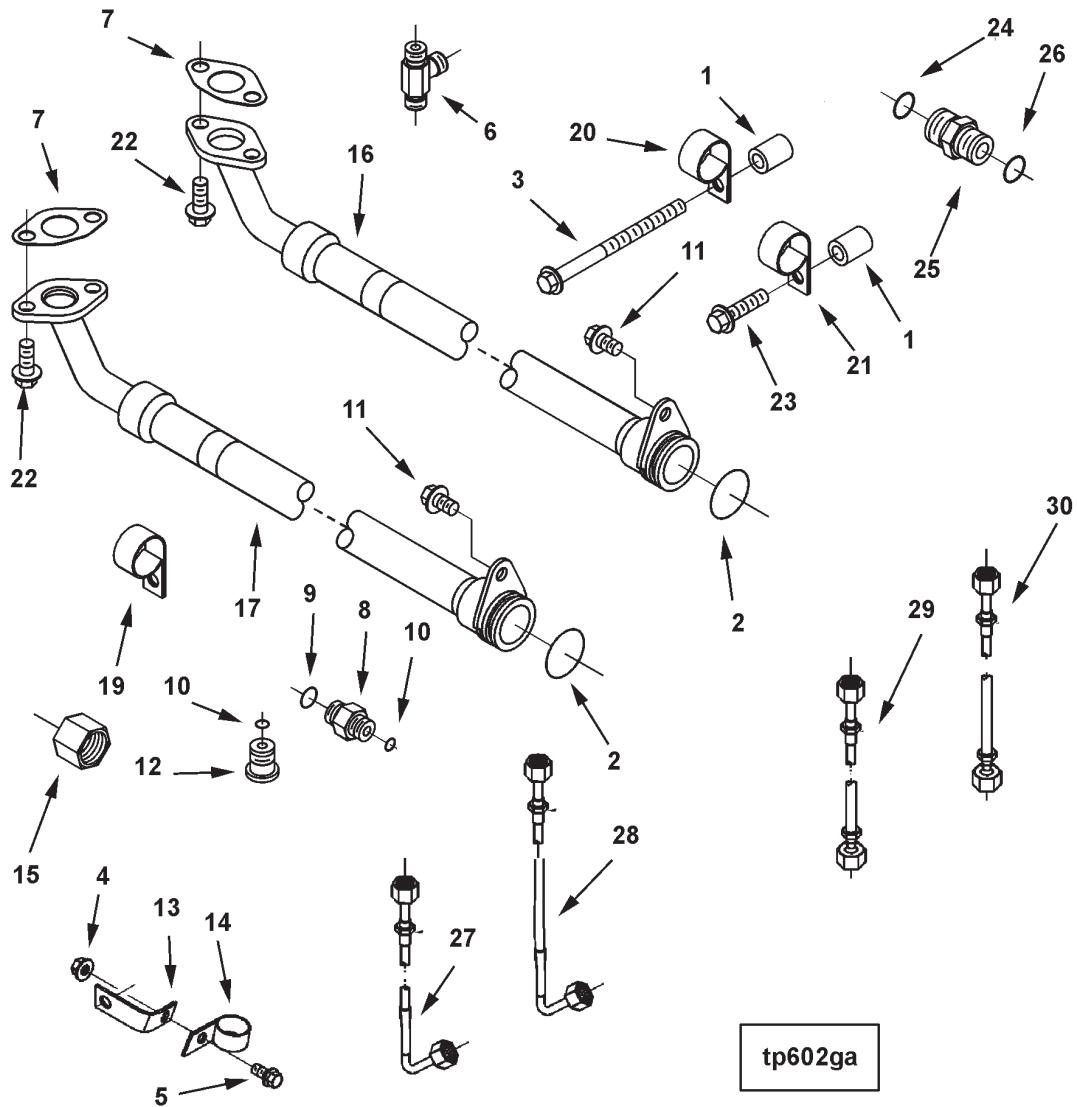


Group No. 08.07

**Housing, Thermostat**

Option No. TH6744

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>HOUSING, THERMOSTAT OPTION TH6744</b>		
1	60985	Hose, Plain	1	
2	3089318	Gasket, Flange	1	
3	3089319	Gasket, Flange	1	
4	3176512	Cover, Protective	2	
5	3278480	Screw, Hex Flange Head Cap	2	
	3332136	Union, Male	1	
6	3332137	Union, Male	1	
7	3678912	Seal, O Ring	1	
8	3922794	Seal, O Ring	1	
9	3633972	Clamp, T Bolt	2	
10	3635353	Gasket, Thermostat Housing	1	
	3636988	Housing, Thermostat	1	
11	205401	Plug, Expansion	1	
	3089238	Plug, Threaded	3	
12	3089239	Plug, Threaded	1	
13	3089240	Seal, O Ring	1	
14	3171320	Connection, Water Outlet	1	
15	3171321	Connection, Water Outlet	1	
16	3171322	Connection, Water Outlet	1	
17	3171323	Connection, Water Outlet	1	
18	3627961	Seal, Thermostat	6	
19	3629205	Thermostat	4	
	3678611	Plug, Threaded	1	
20	3678605	Plug, Threaded	1	
21	3678606	Seal, O Ring	1	
	3678873	Plug, Threaded	1	
22	3678786	Seal, O Ring	1	
23	3678791	Plug, Threaded	1	
	3678921	Plug, Threaded	3	
7	3678912	Seal, O Ring	1	
24	3678922	Plug, Threaded	1	
25	3900630	Screw, Hex Flange Head Cap	30	M8 X 1.25 X 20.
26	3900679	Screw, Hex Flange Head Cap	4	M10 X 1.50 X 80.
27	3902460	Screw, Hex Flange Head Cap	10	M10 X 1.50 X 25.
28	3903464	Screw, Hex Flange Head Cap	2	M10 X 1.50 X 40.
29	4017240	Plug, Expansion	2	
30	4065566	Thermostat	2	
31	4066825	Cover, Thermostat Housing	3	
32	4066827	Gasket, Thermostat Housing	3	
33	4098089	Screw, Hex Flange Head Cap	6	
34	4101150	Gasket, Connection	4	
35	4905883	Spacer, Mounting	6	
36	4905885	Retainer, Thermostat	2	
37	4924463	Retainer, Thermostat	1	
38	4924516	Housing, Thermostat	1	
39	3902451	Screw, Hex Flange Head Cap	7	M12 X 1.75 X 90.
40	3903112	Screw, Hex Flange Head Cap	3	M10 x 1.50 x 30.
41	4916712	Tube, Water Bypass	1	
42	4916714	Tube, Water Bypass	1	

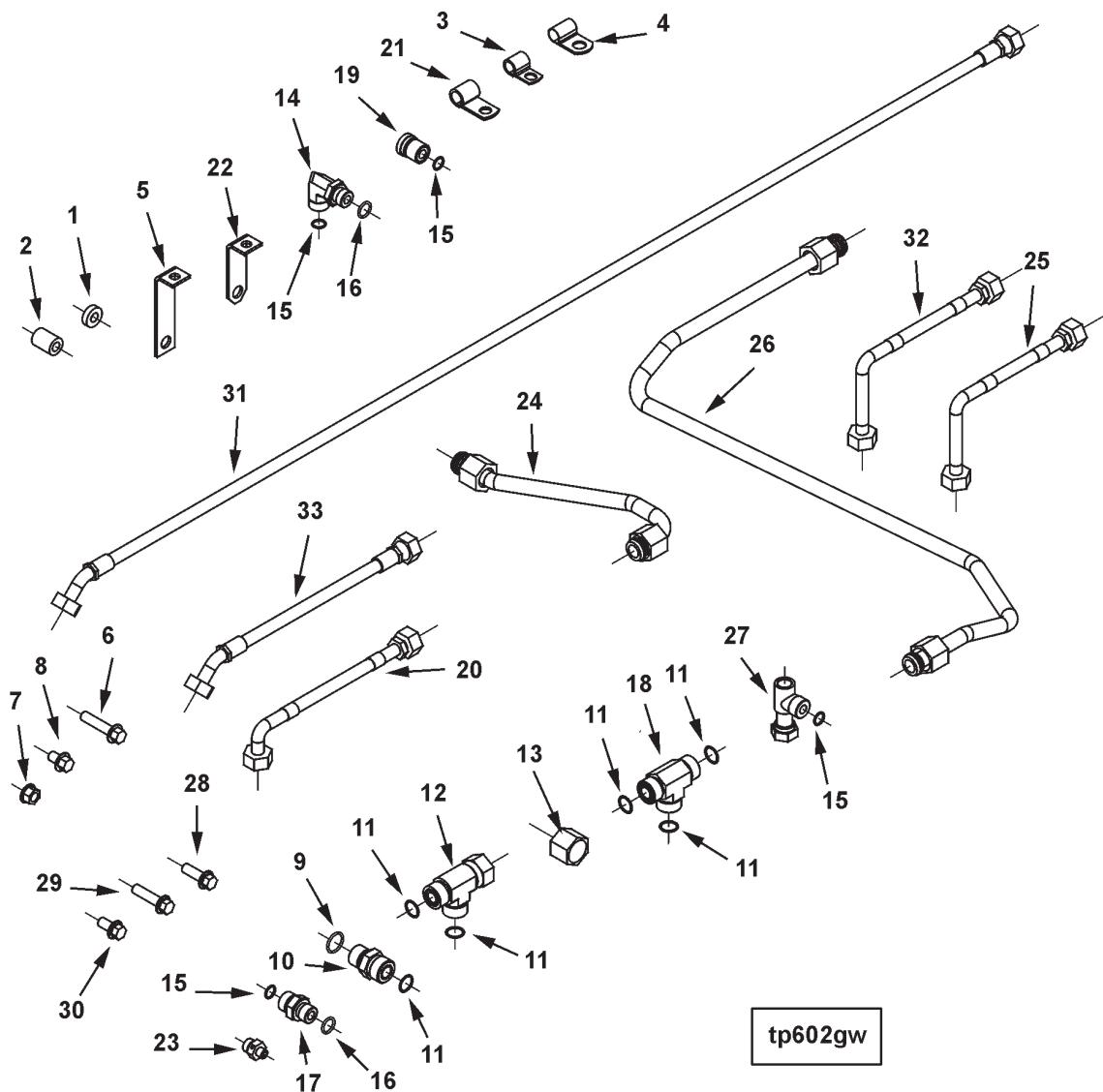


Group No. 10.06.2

**Plumbing,Turbocharger Oil**

Option No. TP6712

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>PLUMBING,TURBOCHARGER OIL OPTION TP6712</b>		
1	64709	Spacer, Mounting	6	Turbocharger oil plumbing
2	216187	Seal, O Ring	4	
3	3089356	Screw, Hex Flange Head Cap	4	
4	3093828	Nut, Hexagon Flange	1	M10 x 1.50 Thd
5	3093957	Screw, Hex Flange Head Cap	5	M10 X 1.50 X 16
6	3089946	Tee, Male Union	2	
7	3089955	Gasket, Connection	4	
	3090400	Union, Male	2	
8	3090419	Union, Male	1	
9	3679139	Seal, O Ring	1	
10	3922794	Seal, O Ring	1	
11	3093957	Screw, Hex Flange Head Cap	4	
	3171839	Reducer, Tube Fitting	2	
12	(3171840)	Reducer, Tube Fitting	1	
10	3922794	Seal, O Ring	1	
13	3171784	Bracket, Water Tube	1	
14	3629452	Clip	5	
15	3331855	Nut, Tube	2	
16	3410940	Hose, Flexible	2	Turbo oil drain(RB front and
17	3410941	Hose, Flexible	2	Turbo oil drain(LB front &RB
19	3629451	Clip	4	
20	3629452	Clip	8	
21	3629453	Clip	2	
22	3902460	Screw, Hex Flange Head Cap	8	M10 X 1.50 X 25.
23	3903464	Screw, Hex Flange Head Cap	2	M10 x 1.50 x 40
	3171818	Union, Male	2	
24	3089240	Seal, O Ring	1	
25	(3171819)	Union, Male	1	
26	3630740	Seal, O Ring	1	
27	3639988	Hose, Flexible	2	
28	3635129	Hose, Flexible	2	
29	3635130	Hose, Flexible	1	
30	3635131	Hose, Flexible	1	



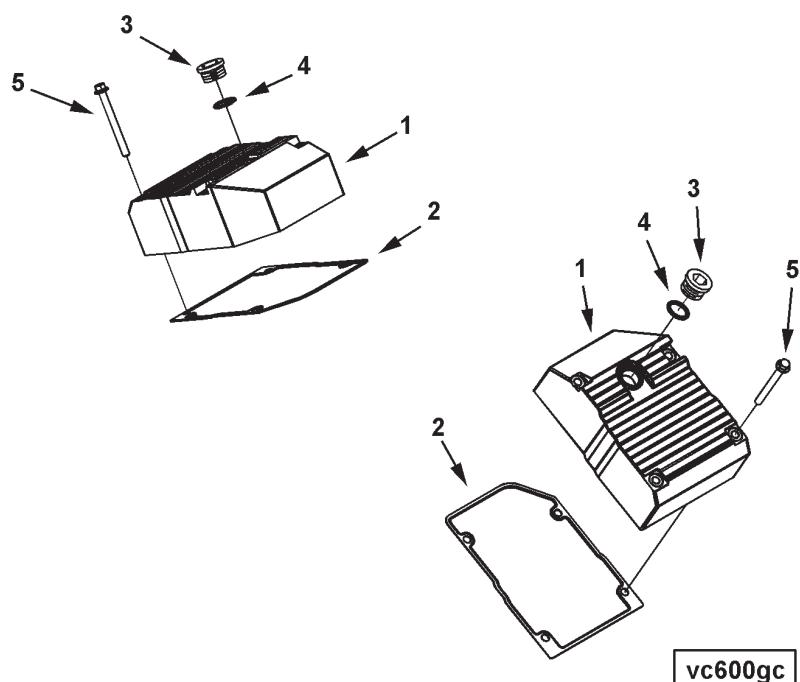
tp602gw

Group No. 10.06.2

**Plumbing,Tur Coolant**

Option No. TP6792

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>PLUMBING,TUR COOLANT OPTION TP6792</b>		
1	62279	Spacer, Mounting	1	
2	64709	Spacer, Mounting	5	
3	68152	Clip	1	
4	68152 B	Clip	7	
5	3642285	Brace, Tube	8	
6	3089232	Screw, Hex Flange Head Cap	5	
7	3093828	Nut, Hexagon Flange	9	
8	3093957	Screw, Hex Flange Head Cap	4	
	3171818	Union, Male	1	
9	3089240	Seal, O Ring	1	
10	3171819	Union, Male	1	
11	3630740	Seal, O Ring	1	
	3171868	Tee, Male Union	1	
12	3171891	Tee, Male Union	1	
11	3630740	Seal, O Ring	2	
13	3331855	Nut, Tube	4	
	3331872	Elbow, Male Union	4	
14	(3331837)	Elbow, Male Union	1	
15	3627695	Seal, O Ring	1	
16	3678786	Seal, O Ring	1	
	3331873	Union, Male	8	
17	(3331838)	Union, Male	1	
15	3627695	Seal, O Ring	1	
16	3678786	Seal, O Ring	1	
	3331876	Tee, Male Union	2	
18	3331857	Tee, Male Union	1	
11	3630740	Seal, O Ring	3	
	3331881	Reducer, Tube Fitting	4	
19	3331882	Reducer, Tube Fitting	1	
15	3627695	Seal, O Ring	1	
20	3410965	Hose, Flexible	2	
21	3627412	Clip	1	
22	3628554	Brace, Tube	1	
23	3634708	Draincock	4	
24	3635317	Tube, Water Drain	1	
25	3635898	Hose, Flexible	1	
26	3636415	Tube, Water Drain	1	
	3637780	Tee, Male Union	4	
15	3627695	Seal, O Ring	1	
27	3637779	Tee, Male Union	1	
28	3903112	Screw, Hex Flange Head Cap	1	M10 x 1.50 x 30.
29	3903464	Screw, Hex Flange Head Cap	2	M10 X 1.50 X 40.
30	3903990	Screw, Hex Flange Head Cap	6	M10 X 1.50 X 20.
31	4016441	Hose, Flexible	2	
32	4086653	Hose, Flexible	1	
33	4086754	Hose, Flexible	2	

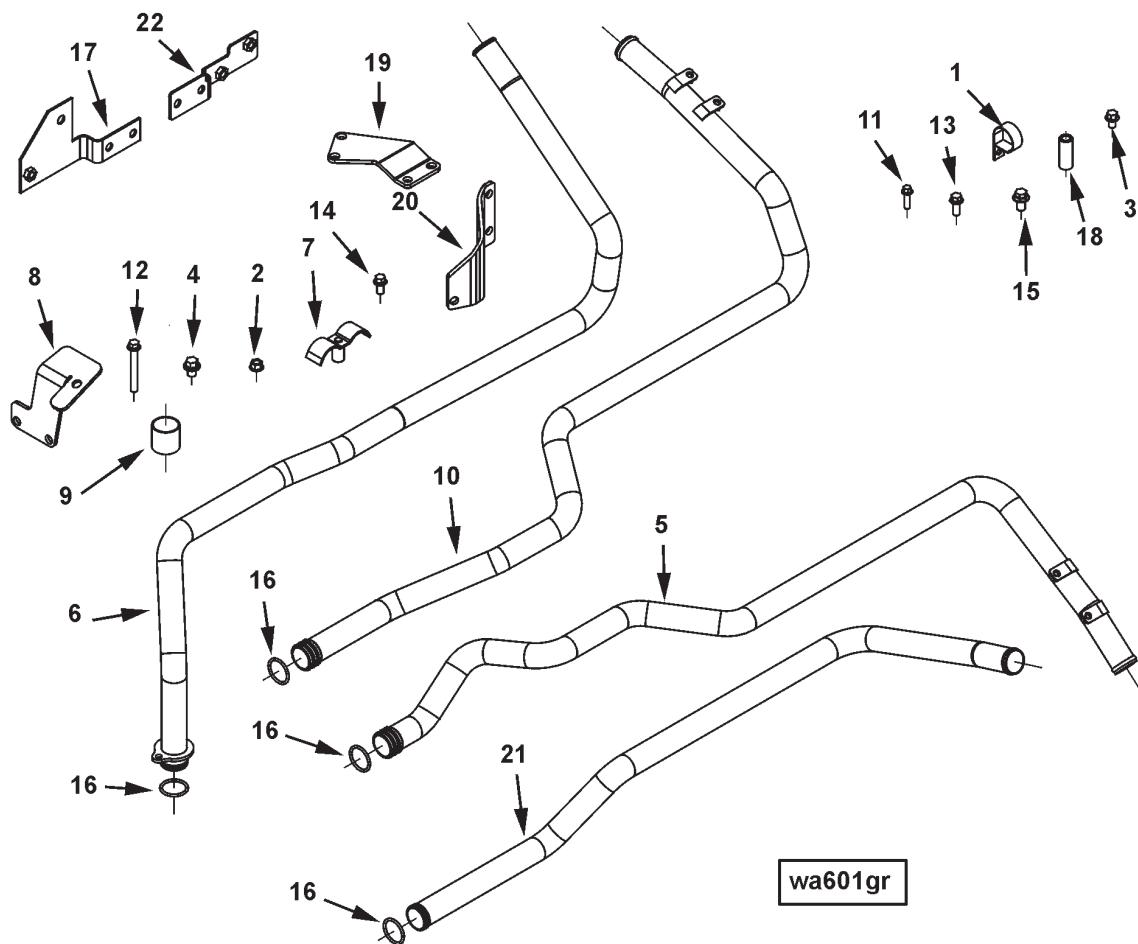


Group No. 03.01.1

**Valve Cover**

Option No. VC6008

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>VALVE COVER OPTION VC6008</b>		Valve cover material/color: Cast iron Unique Characteristics: To be used on quantum qsk60 industrial engines.
1	3090495	Cover, Valve	16	
2	3332291	Gasket, Rocker Lever Cover	16	
	3678611	Plug, Threaded	16	
3	(3678605)	Plug, Threaded	1	M27x2
4	3678606	Seal, O Ring	1	
5	3914407	Screw, Hex Flange Head Cap	64	M10 X 1.50 X 100.

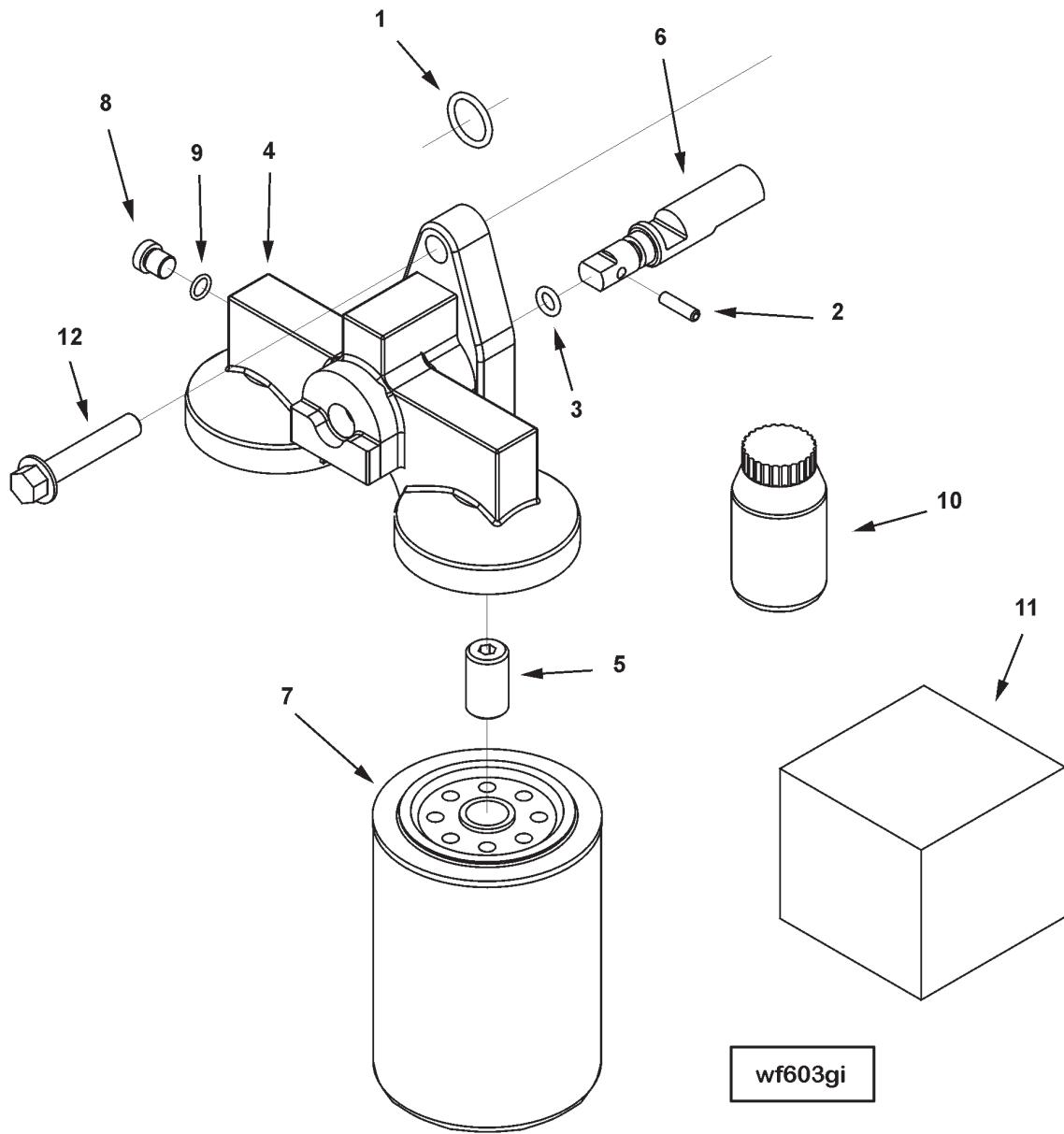


Group No. 10.01.1

**Plumbing,Aft Water**

Option No. WA6728

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>PLUMBING,AFT WATER OPTION WA6728</b>		
1	68189	Clip	10	
2	3093828	Nut, Hexagon Flange	1	
3	3093957	Screw, Hex Flange Head Cap	15	
4	3279244	Screw, Hex Flange Head Cap	6	
5	3635265	Tube, Water Transfer	1	
6	3635440	Tube, Water Transfer	1	
7	3637131	Clamp, Retaining	1	
8	3637143	Bracket, Connection	1	
9	3637402	Sleeve, Wear	2	
10	3637496	Tube, Water Transfer	1	
11	3900630	Screw, Hex Flange Head Cap	1	M8 X 1.25 X 20.
12	3900679	Screw, Hex Flange Head Cap	1	M10 X 1.50 X 80.
13	3902460	Screw, Hex Flange Head Cap	2	M10 X 1.50 X 25.
14	3903990	Screw, Hex Flange Head Cap	13	M10 X 1.50 X 20.
15	3913372	Screw, Hex Flange Head Cap	2	M12 X 1.75 X 20.
16	4066112	Seal, O Ring	8	
17	4066204	Bracket, Water Tube	1	
18	4080242	Spacer, Mounting	1	
19	4080243	Bracket, Water Tube	2	
20	4080251	Bracket, Connection	1	
21	4100863	Tube, Water Transfer	1	
22	4100991	Bracket, Water Tube	1	



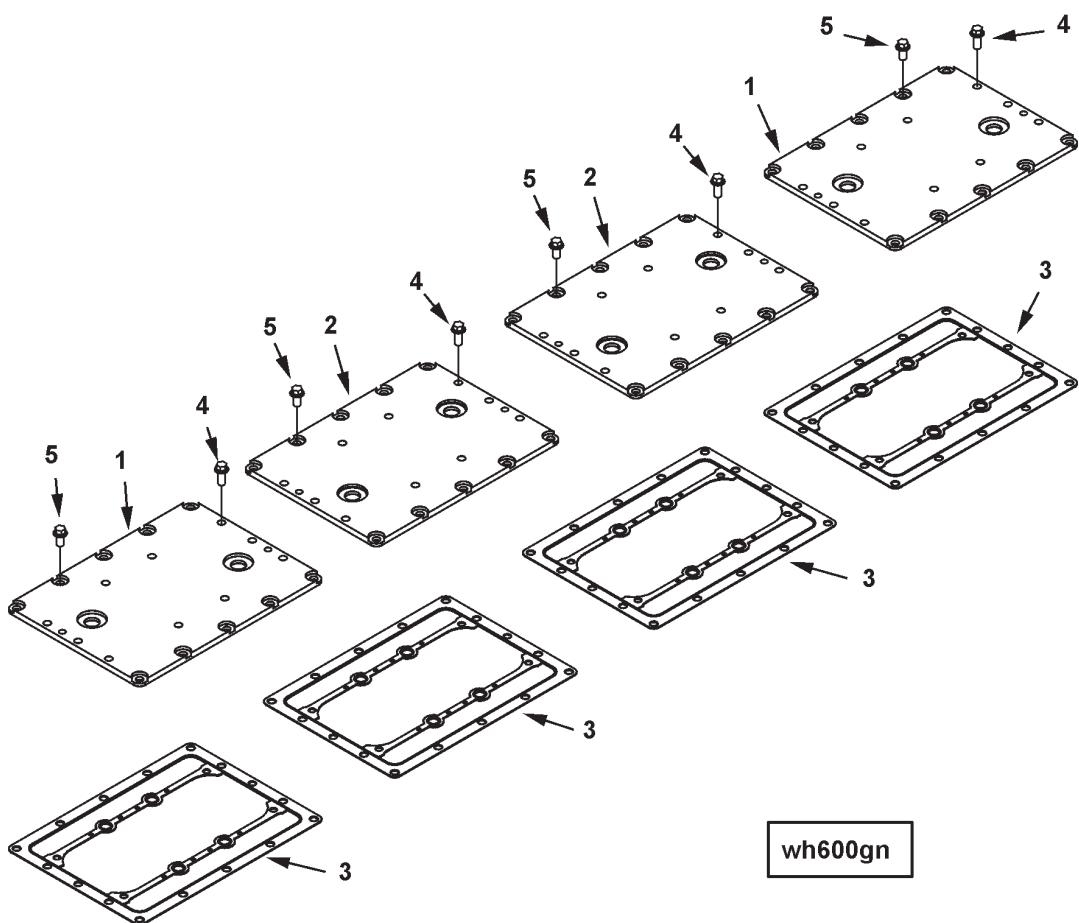
wf603gi

Group No. 08.08

**Resistor,Corrosion**

Option No. WF6049

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>RESISTOR,CORROSION OPTION WF6049</b>		Corrosion resistor type of element: Replaceable spin-on cartridge length: 5.55in (141mm) mounting location: On LB end of thermostat housing
				Number Of Filter Heads: 1 Number Of DCA Units: Two 15 Units type of mounting: Integral to thermostat housing. Type of plumbing: None shut-off valve location: Integral units of corrosion inhibitor in filters: 30 units of corrosion inhibitor in kit: 420 service bulletin number: 3666132 if antifreeze is not available. Suitable use on engines with coolant systems between 530 and 1050liter capacities (140 and 280 US gallons).
1	145528 3089299	Seal, O Ring Head, Corrosion Resistor	4 1	
2	8306	Pin, Roll	1	
3	70415	Seal, O Ring	1	
4	3089298	Head, Corrosion Resistor	1	
5	3175768	Adapter, Filter Head	1	
6	3177040	Shaft, Shutoff Valve	1	
7	3100308 3678923	Resistor, Corrosion Plug, Threaded	2 1	Buy from Cummins Filtration M10 x 1.00 x 9.5
8	(3678924)	Plug, Threaded	1	M10 X 1 X 13.5
9	3678925	Seal, O Ring	1	
10	3888312	Inhibitor, Corrosion	1	Buy from Cummins Filtration
11	3888638	Additive, Ati Coolant	2	Buy from Cummins Filtration
12	3910901	Screw, Hex Flange Head Cap	2	M10 x 1.50 x 55

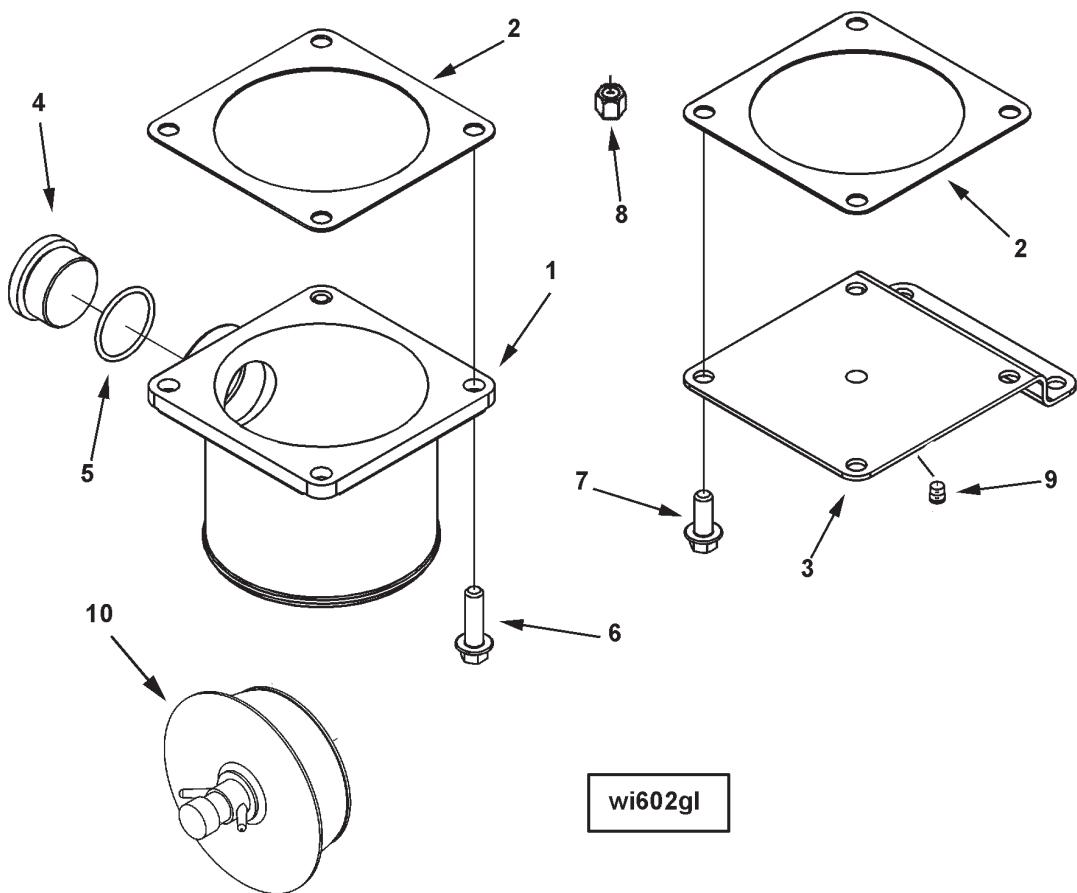


Group No. 08.07.1

**Plumbing,Oil Cooler Water**

Option No. WH6718

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>PLUMBING,OIL COOLER WATER OPTION WH6718</b>		
1	3332001	Cover, Water Header	2	
2	3332002	Cover, Water Header	2	
3	3410850	Gasket, Water Header Cover	4	
4	3902460	Screw, Hex Flange Head Cap	40	M10 X 1.50 X 25.
5	3903990	Screw, Hex Flange Head Cap	40	M10 X 1.50 X 20.

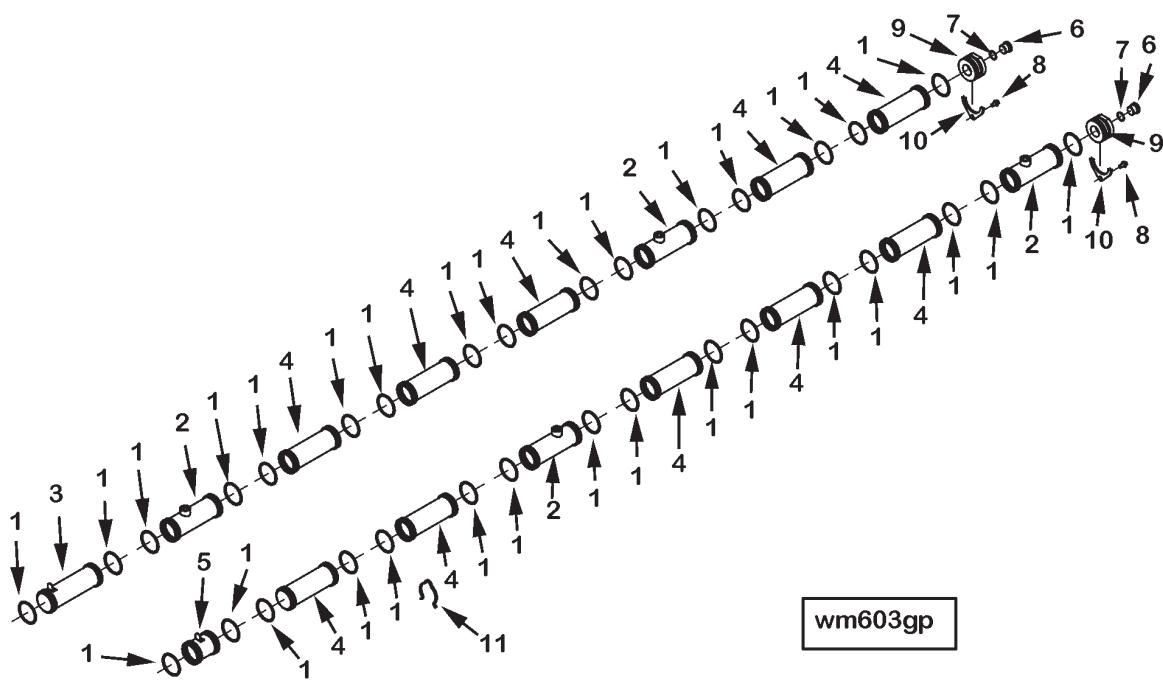


Group No. 08.07.1

**Connection,Water Inlet**

Option No. WI6017

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>CONNECTION,WATER INLET OPTION WI6017</b>		
1	3171098	Connection, Water Inlet	1	
2	3179035	Gasket, Wtr Trf Connection	2	
3	3631921	Cover, Water Transfer	1	
	3678611	Plug, Threaded	1	
4	(3678605)	Plug, Threaded	1	
5	3678606	Seal, O Ring	1	
6	3902460	Screw, Hex Flange Head Cap	4	M10 x 1.50 x 25
7	3903990	Screw, Hex Flange Head Cap	6	M10 X 1.50 X 20.
8	3902662	Nut, Hexagon Flange	2	M10 x 1.50
9	3628605	Plug, Pipe	1	1/4-18
10	4100771	Plug, Orifice	1	

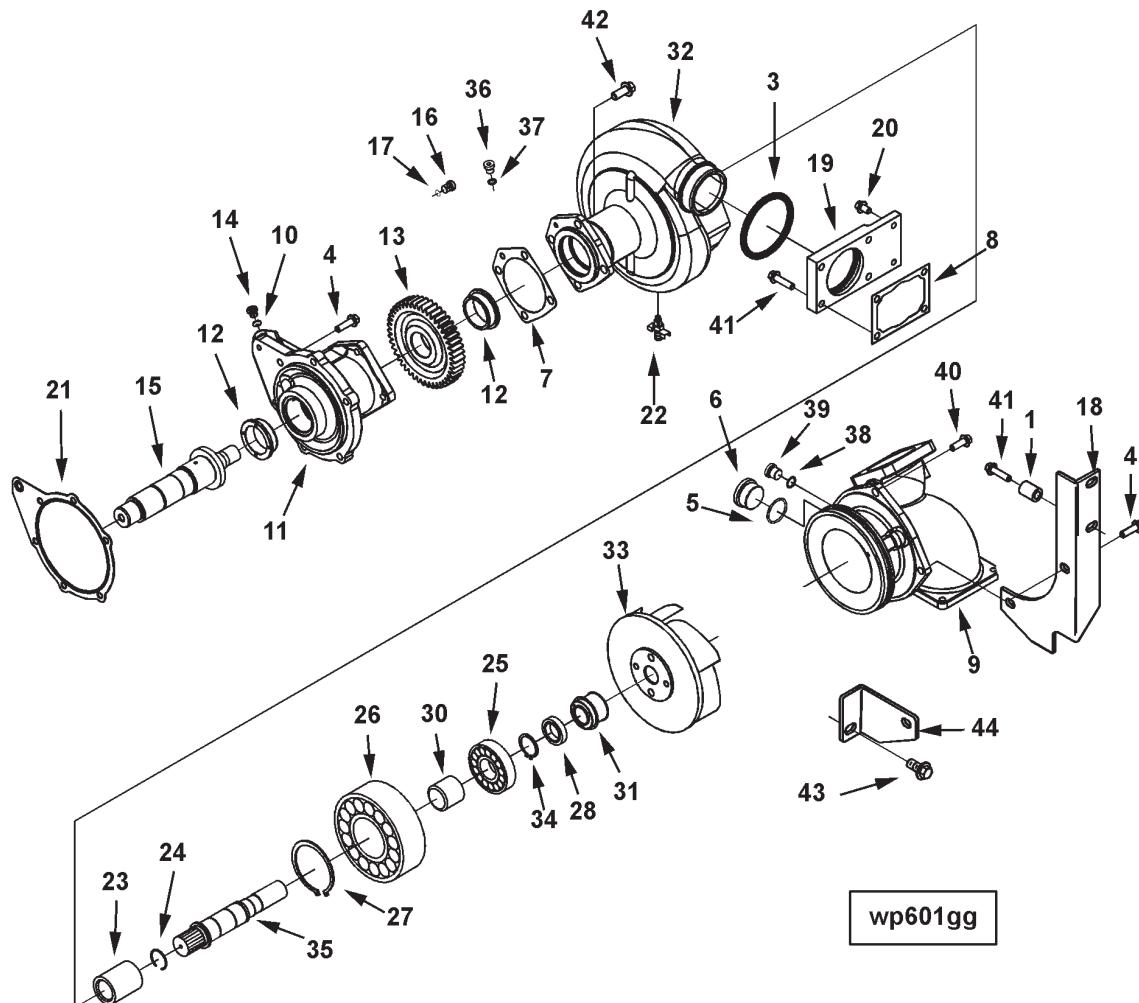


Group No. 08.06

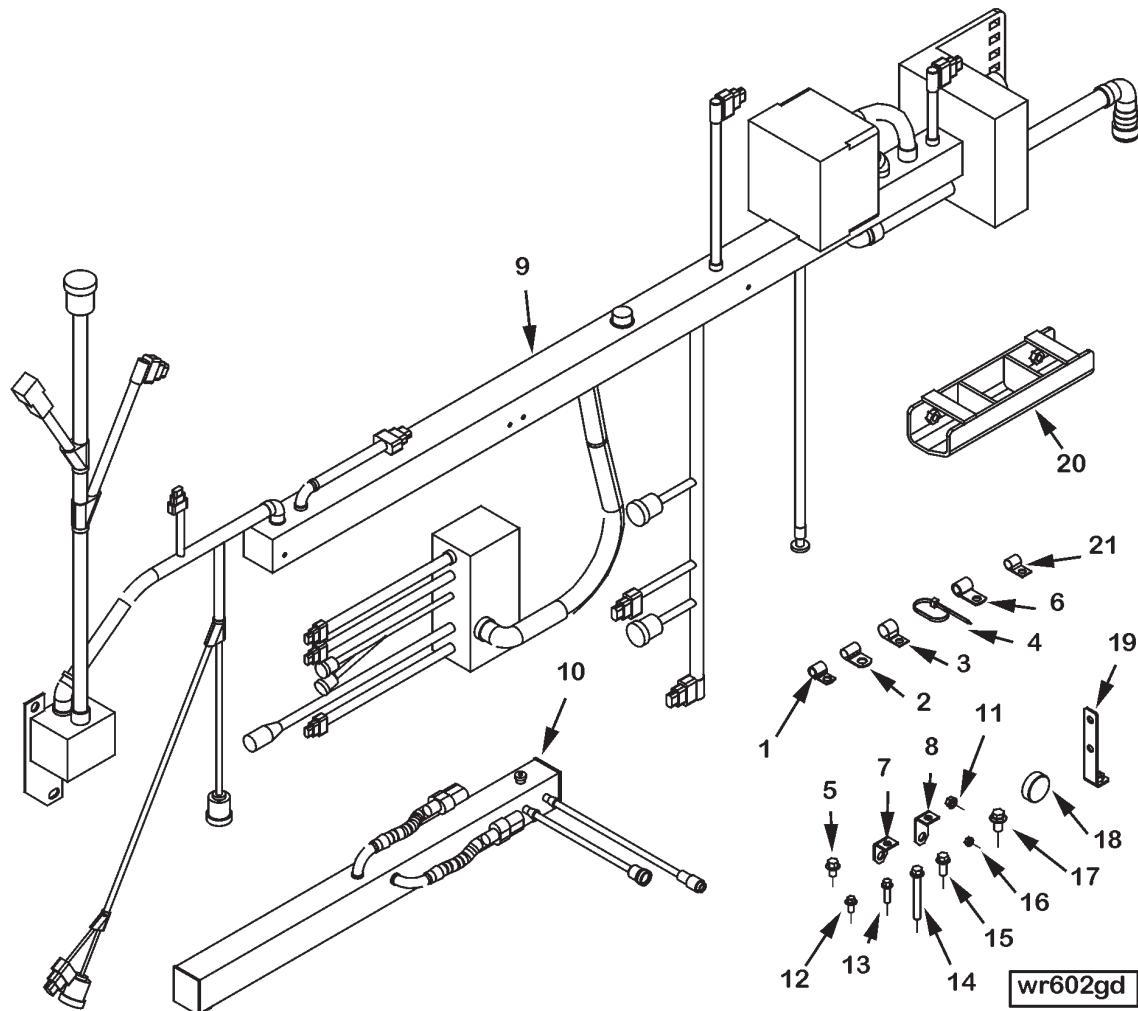
**Manifold,Water**

Option No. WM6716

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>MANIFOLD,WATER OPTION WM6716</b>		
1	3081695	Seal, O Ring	34	
2	3637819	Tube, Water Transfer	4	
3	3637822	Tube, Water Transfer	1	
4	3637825	Tube, Water Transfer	10	
5	3637826	Tube, Water Transfer	1	
	3678611	Plug, Threaded	2	
6	3678605	Plug, Threaded	1	
7	3678606	Seal, O Ring	1	
8	3900629	Screw, Hex Flange Head Cap	2	M8 X 1.25 X 16.
9	4100845	Plug, O Ring	2	
10	4100846	Clamp, Retaining	2	
11	4100847	Ring, Retaining	1	



Ref No.	Part Number	Part Name	Req	Remarks
		<b>WATER PUMP OPTION WP6012</b>		
1	64709	Spacer, Mounting	1	
3	3007512	Seal, O Ring	1	
4	3089016	Screw, Hex Flange Head Cap	7	
	3089023	Plug, Threaded	1	
5	3089019	Seal, O Ring	1	
6	(3089021)	Plug, Threaded	1	
7	3089261	Gasket, Water Pump	1	
8	3089262	Gasket, Water Pump	1	
9	3089731	Connection, Water Inlet	1	
	4066277	Support, Water Pump	1	
10	3634019	Plug, Expansion	1	
	(4066278)	Support, Water Pump	1	
11	4066279	Support, Water Pump	1	
12	3089409	Bushing	2	
13	3089100	Gear, Accessory Drive	1	
14	3089412	Plug, Orifice	1	
15	3332037	Shaft, Water Pump	1	
	3678923	Plug, Threaded	1	M10 x 1.00 x 9.5
16	(3678924)	Plug, Threaded	1	M10 X 1 X 13.5
17	3678925	Seal, O Ring	1	M10 x 1.00
18	4007215	Bracket, Connection	1	
19	4016906	Adapter, O Ring	1	
20	3903990	Screw, Hex Flange Head Cap	2	M10 x 1.50 x 20
21	3332299	Gasket, Water Pump Support	1	
	(3635811)	Pump, Water	1	
22	3638582	Draincock	1	
23	206195	Sleeve, Spline Coupling	1	
24	206196	Ring, Retaining		
	(3635786)	Pump, Water	1	
25	S 16054	Bearing, Ball	1	
26	S 16069	Bearing, Ball	1	
27	70183	Ring, Retaining	1	
28	3634146	Seal, Oil	1	
30	3030487	Spacer, Bearing	1	
31	3634007	Seal, Water Pump	1	
32	3635712	Body, Water Pump	1	
33	3172019	Impeller, Water Pump	1	
34	3175573	Ring, Retaining	1	
35	3634049	Shaft, Water Pump	1	
	3678610	Plug, Threaded	2	M12 x 1.50
36	(3678602)	Plug, Threaded	1	M12 x 1.50 THD
37	3678603	Seal, O Ring	1	
	3678873	Plug, Threaded	1	
38	3678786	Seal, O Ring	1	
39	(3678791)	Plug, Threaded	1	
40	3903112	Screw, Hex Flange Head Cap	2	M10 x 1.50 x 30
41	3903464	Screw, Hex Flange Head Cap	5	M10 x 1.50 x 40
42	3910495	Screw, Hex Flange Head Cap	4	M12 x 1.75 x 30
43	3901249	Screw, Hex Flange Head Cap	1	M12 x 1.75 x 25
44	4007216	Bracket, Connection	1	



Group No. 05.06.1

**Harness,Etr Cnt Mdl Wrg**

Option No. WR6766

<b>Ref No.</b>	<b>Part Number</b>	<b>Part Name</b>	<b>Req</b>	<b>Remarks</b>
		<b>HARNESS,ETR CNT MDL WRG OPTION WR6766</b>		Electronic control module wiring harness cense: Yes flywheel size: SAE "0" variable viscous clutch: Yes
1	68152	Clip	1	For use on qsk60 single and two stage Industrial engines.
2	68152 B	Clip	3	
3	69911 A	Clip	1	
4	3062329	Clamp, Wire Tie	1	
5	3093957	Screw, Hex Flange Head Cap	1	
6	3627412	Clip	1	
7	3628553	Brace, Tube	1	
8	3628585	Brace, Tube	1	
9	3637068	Harness, Etr Cnt Mdl Wrg	1	
10	3639664	Harness, Wiring	1	
11	3900589	Nut, Hexagon Flange	2	M8 X 1.25
12	3900629	Screw, Hex Flange Head Cap	2	M8 X 1.25 X 16
13	3900630	Screw, Hex Flange Head Cap	1	M8 x 1.25 x 20
14	3900679	Screw, Hex Flange Head Cap	2	M10 X 1.50 X 80.
15	3902460	Screw, Hex Flange Head Cap	2	M10 x 1.50 x 25
16	3906216	Nut, Hexagon Flange	1	M6 X 1.00
17	3913372	Screw, Hex Flange Head Cap	1	M12 x 1.75 x 20
18	4017050	Cover, Protective	3	
19	4066935	Brace, Wiring	1	
20	4067011	Bracket, Wiring Retainer	1	
21	4100552	Clip	2	

Group No. 17.02

**Gasket Sets**

Ref No.	Part Number	Part Name	Req	Remarks
	4025140	<b>SET,UPPER ENGINE GASKET</b> Set,Upper Engine Gasket When you order this now it comes in several sets.	1	

Group No. 17.02

**Gasket Sets**

Ref No.	Part Number	Part Name	Req	Remarks
	4089148	<b>SET, LOWER ENGINE GASKET</b> Set,Lower Engine Gasket When you order this you will get in several sets now. It is broken down.	1	

## NOTES

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